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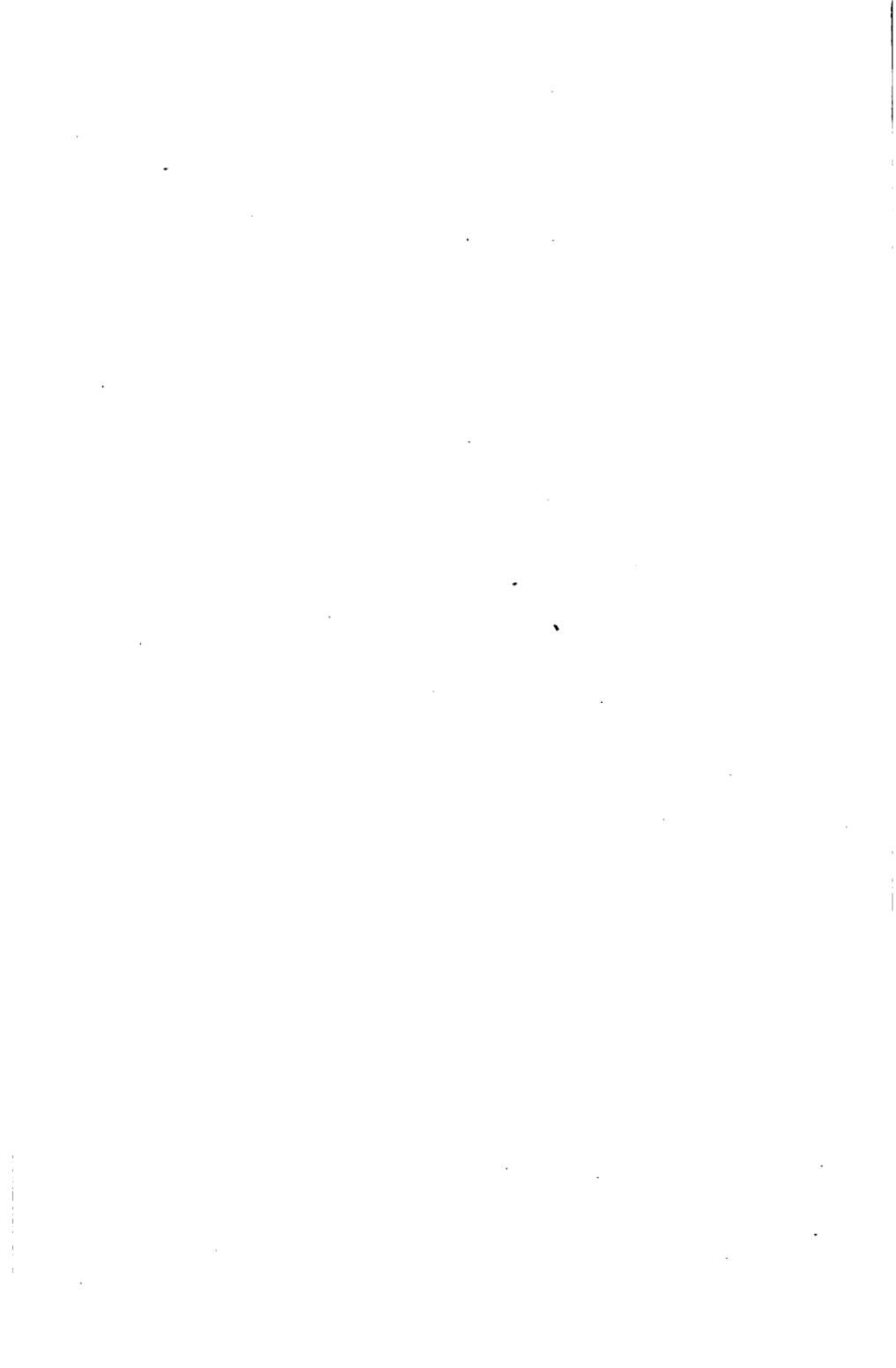
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APPRECIATION OF GOLD.

An Essay.

BY

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P R E F A C E .

I REGRET that this paper is so long ; I should have cut it down, had I not been much interrupted during its progress.

I wish to make one explanation. I have no prejudice against the use of silver as money. It appears to me to suit some nations and not others—why, it is not useful to discuss here. The larger part of the population of the world appear to prefer it ; but that fact is hardly an argument for the resumption of its use by us. Formerly we used it as our standard and our legal tender money. To John Locke it seemed the one natural money. We gave it up for reasons which appeared to very competent men to be sufficient.

I cannot see anything in the events which have happened to induce us to take it up again. It has not become more stable in value in recent years, and it seems likely to be less stable than ever.

If silver be alive and strong, we may leave it to the care of those who are naturally concerned in its future. If it be dying, let us take heed lest we should find ourselves tied to a corpse.

WILLIAM FOWLER.

P.S.—Since writing this Essay, I have seen an argument for a double money based on the history of our National

Debt. It is said that, as part of the Debt was created when debtors could pay in silver or gold, it was not just in 1816 to take away this option, and compel payment in gold in any event.

Far the larger part of the existing Debt was created between 1797 and 1816, on a paper basis, when cash payments were suspended; or since 1816, under the single gold standard. The argument therefore does not apply to the whole Debt.

Moreover, apart from this, it seems to be forgotten that thirty-five years ago it was fully expected that the sovereign would be depreciated; but compensation to the Fund-holder was not proposed by any responsible person. Now, by another turn in events, an advantage is alleged to have arisen to the holder, and it seems hard to take it from him. He must take his chance. It is quite possible that the phenomena of 1850 may be repeated. Discoveries of gold are much talked of. It seems to me that the settlement of 1816 ought not to be disturbed in the interest of any set, whether creditors or debtors. The turn of the debtors may come again, and, if it comes, they ought to have it.

Certainty and stability, so far as legislation can give them, are what we need; not fluctuating laws about money. Variations of supply and demand must come, and will cause many gains and losses; but hasty legislation, as in Germany and America, has wrought far more mischief than natural changes have effected. From these cases we ought to take warning, and exercise the greatest caution in dealing with our laws about money.



APPRECIATION OF GOLD.

THE first point in this discussion seems to be the definition of our meaning when we speak of "appreciation of gold." These words may mean that a given weight of gold will purchase more of most articles of consumption than it would have purchased in years gone by; or, in other words, that prices generally, as measured in gold, have fallen; or it may include the hint of an opinion that gold has become scarce, and therefore dear. That many prices have fallen is a fact which no one disputes; but much dispute arises when we inquire into the cause of such fall. Of course prices may have fallen (1) because, with a tolerably even supply of gold, the supply of other articles has developed with astonishing rapidity in consequence of modern inventions affecting production or distribution; or (2) because the supply of gold has fallen away, so that a scarcity of money available for exchange has arisen; or (3) possibly these two causes may coincide—that is to say, the supply of gold from the mines may be contracting at the very time when other articles are brought forward in greatly increased proportion.

The importance of the question involved in this discussion arises from the fact that the existing depression in many trades is by some attributed, mainly, if not entirely, to the fall in prices arising from a change in the supply of gold, so that a remedy is sought in some change of currency and especially in an endeavour to increase the use of silver as money, in order to counteract the alleged scarcity of gold.

The causes of depression have been much discussed in various publications of the Club with especial reference to the Free Trade controversy. There does not seem to be much prospect of any responsible English Minister adopting Protection as a means of reviving our trade. The interests involved are too numerous and too antagonistic to give rise to any general demand for Protective duties. A manufacturer who demands Protection for himself, clings to cheap food and cheap raw materials ; and the farmer who longs for a duty on cereals desires to have clothes, machinery, etc., at the lowest possible prices.

But it is quite possible for those who differ as to Protection to agree in the proposition that "something must be done" for the good of all. Producers feel keenly the loss arising from a fall in prices, and they snatch at any proposals which may possibly check so disagreeable a process, without reflecting much on the ultimate consequences of hasty changes.

The general principles involved do not seem to be disputed on either side ; but differences arise as to their application where facts are so complicated and numerous. Money being used both as a measure of value and as a means of making exchanges, it is obvious that, if the demand for purposes of exchange should greatly increase without an increase of supply, we might have a real scarcity of money, so that its "value," by reason of this demand, might rise, or "appreciate," when compared with other articles. So money might lose in part its fitness as a "standard" of value. On the other hand, supplies of bullion being pretty constant, the value of money might "depreciate" in exchange, if through changes in the machinery of credit there should arise a decrease in the demand for actual money for exchange. Perfect stability cannot be secured by any arrangements, so long as commercial changes are so continuous and important. We cannot have a perfect standard ; but the question now arises whether we are not safer with "a pound" or unit of value consisting of a given weight of one metal, than with a pound payable in either of two metals at the option of the payer.

The first point seems to be that we should clearly understand the facts as to the supply and demand of the

precious metals since 1849, and endeavour to decide whether gold is or not really "scarce."

Comparing the two metals—gold and silver—it is curious that, whereas in 1850 the stock of silver was estimated at thirty-two times in weight that of gold, it is now supposed to be about nineteen times; and were their prices regulated merely by the stocks of the two metals at different periods, the price of silver should now be 102 pence per ounce, instead of 43 pence (Mulhall, "History of Prices," p. 17). Silver has fallen, although the stock of gold has increased far more than that of silver; but the demand for gold has increased more rapidly than that for silver, although India and China have absorbed great amounts of silver during the past twenty-five years.* There seems indeed to be no obvious and permanent connection between the price of silver in Europe and the stocks of gold and silver. Silver did not rise materially from 1852 to 1857, when the annual production of gold increased, while that of silver remained stationary (see Appendix A), and in the period since 1872 silver has fallen in Europe far more than can be accounted for by changes in the production of the precious metals, considerable as these have been. The explanation would seem to be that in the former period there was no special change in the position of silver in Europe, no new supply and no altered demand, and France was able to absorb a very large amount of gold; whereas in the latter period there was an enormous new supply of silver from Germany and the United States, and a sudden destruction of

* The American figures are as follows:—

Total production of gold in 36 years from 1849 to 1884—£776,595,000
 " " " silver " " " " " " " £450,000,000

Dividing 1850 to 1884 in periods of five years; the supply of gold is as under:—

1850—54	...	£105,000,000	Or per year	...	£21,000,000
1855—59	...	138,000,000	"	...	27,600,000
1860—64	...	112,000,000	"	...	22,400,000
1865—69	...	112,000,000	"	...	22,000,000
1870—74	...	100,000,000	"	...	20,000,000
1875—79	...	109,000,000	"	...	22,000,000
1880—84	...	100,000,000	"	...	20,000,000

demand by the cessation of free coinage by the Latin Union, to say nothing of increased drafts on India by her Government in London. It is not wonderful that silver has fallen heavily in recent years. The wonder is that it did not rise when there came that sudden and enormous increase in the production of gold. (See Appendix B.)

To us in England, silver, as money, is of no more consequence than copper, it being only token money, and not legal tender for more than forty shillings. So far, the changes in the value of silver in Europe would appear to have assisted the people of India by giving them more favourable markets for their produce, while silver prices in India have not risen.*

* The recent letter of Secretary Manning to the House of Representatives in Washington offers some important points for our consideration. (March 2, 1886.)

The unit of value in the United States of America is the gold dollar, and both gold and silver are legal tender; but there is not free coinage of silver, but a forced coinage of at least 2,000,000 dollars per month, which coins are legal tender for 100 cents each, though only worth about 75 cents at this moment.

The Americans dare not have free coinage of silver, as they fear that they should lose their gold and have it all replaced by silver, so long as silver can be bought at a low price in Europe. The result would be a silver and paper circulation, with a gold unit of value—a nominal gold dollar, with only silver and paper obtainable. Therefore, they desire an arrangement with Europe, so as to create a price for silver by agreement, which would prevent import of silver from Europe and export of gold from America.

It is clear that the Americans shrink from a silver standard of value, and they at the same time desire to use silver as largely as possible as legal tender, not token money. They not only have great stocks of gold and silver but they produce both, and therefore for various reasons they desire to make use of both metals as money and not to cast discredit on either.

Their present situation affords a good illustration of the difficulties which may arise from using two metals as legal tender money, even though the unit of value be by law most clearly defined to be in one metal only. Just the same difficulty arises in France, where the stock of silver held is very large, and of course the Government desires to avoid, if possible, any loss on that holding.

The United States Secretary denounces forced coinage, and longs for free coinage of silver, with complete legal tender, as the only reasonable way of getting a proper supply of coin, because thus people supply themselves, and will not use or keep more or less coin than they require; whereas the State cannot know what is required, and a fixed and forced

The present situation seems to be as follows. Since 1850 there has been in Europe, America, and Australia (which include the great civilised communities, and those where gold is chiefly used as money) a great increase of population, estimated at about 117 millions, or nearly 45 per cent. During the same period there has been a great increase of productive power over the whole world (probably 50 per cent.), especially in the same countries ; and, along with this extension of population and production, a great development of trade.

The trade of the world is at least four times as great as it was in 1850, and the mere weight of goods moved is six times as great as it then was. Such changes cannot occur without causing a need for more money available for exchange of commodities, and this increased quantity has been supplied, partly by the discovery of great supplies of gold and silver, and partly by a great extension of credit ; so that, as a final result, we have large stores of coin and bullion in circulation or reserve, and the interest paid on money lent for short periods has been lower than in any recent period of our commercial history ; but we have, at the same time, a scale of prices lower than that of 1850. All this trade has been done—and that with fewer panics and alarms than in former times—great masses of produce have been moved and exchanged, and the enormous increase in the total produce has only caused a slight fall of prices in thirty-five years. The fall may be great in some cases, when measured from 1873 ; but it is slight when measured from 1850. It would seem probable that, all other things being the same as they are now, we must have seen a far greater fall in prices if there had been no increase of gold and

circulation takes no account of real needs. But he is hampered by the state of the silver market. He dares not ask America to act alone.

The following figures are interesting :—

Total gold in United States Treasury on January 30,		
1886	...	£50,000,000
Total standard silver dollars coined same date	...	£44,000,000
Gold certificates outstanding { including those in Treasury. }	...	£27,800,000
Silver ,,, ,,,	...	£25,000,000
Total gold in United States, January, 1886	...	£106,000,000

silver. The mere extension of credit, however important, might not alone have sufficed to maintain even the prices of 1850. In 1850 every one expected that gold would soon buy less goods than formerly. The result has been that a given weight of gold will now buy more than at any time in the present century. How far the change depends on supplies of money, and how far on other causes, is the question of interest about which so much is being said and written. Gold did depreciate. It is now slightly appreciated, but greatly depreciated as compared with what its value would have been had no new supplies come forward.

It is often forgotten in discussions on the effect of the increase of production that, however great that increase, the articles produced are quickly used up and done with. They are exchanged and dealt with, and they cease to be. But the case is not so with the precious metals. They accumulate by reason of their durability, and an increase of stock is comparatively a permanent addition to the fund available for exchanges.* In any given year the increase of articles to be moved may be great, but the movement of this increased product does not involve the consumption of the precious metals, except by wear and tear. They do the work, and are ready to do it over again. It follows that we cannot regard the accumulation of goods as a cumulative increase, as is that of the precious metals ; and therefore the increase of the metals tends far more towards maintaining prices than does the increase of production towards the reduction of prices.

It is, however, said that gold must be scarce, because the annual supply is much less than it was thirty years ago, and because so much gold was absorbed by America, Germany, and Italy in a single decade. It is alleged that 200 millions was thus absorbed ; but there seems to be an insufficient grasp of the facts and a theoretical defect in the argument as to the so-called "absorption."

* Compare Secretary Manning's letter to Secretary of Treasury (U.S.A.), cited above, p. 17 : "Standing over against the vast aggregate of human commodities, mostly perishable, which sinks and swells with seed-time and harvest, as the seasons change, and of which the unconsumed and more or less imperishable part is so small, the monetary metals of the world are the most trustworthy attainable measure of value."

In the first place, it is not sufficiently noted that the circulation of notes by the Bank of France, over the amount of bullion held, increased by £91,000,000 from January, 1870 to November, 1873. This great movement arose no doubt from the war and the war-indemnity, but it must have had an effect on prices in Europe, and should be set against the supposed absorption of gold. Much of the gold coined by Germany came, no doubt, from France, and its production was assisted by means of this great issue of notes. It is surely clear that gold coined by Germany was quite as much money, and quite as useful, as gold hoarded by French peasants and traders. It is also clear that coined gold, whether coined in the usual course or in an unusual way, as in Germany, America, and Italy, is gold in its most useful form for purposes of money. It does not seem, therefore, to be sound reasoning to assume that gold so coined is somehow "absorbed," so that demands for coinage, as such, must tend to lower prices. The gold is there, although the localities in which it is stored or used may be changed. It would be absurd to treat it as a new supply of money; but, on the other hand, it seems absurd to treat it as a disappeared factor in the general supply of money, and as if it had ceased to influence prices.

A similar remark may be made as to the annual absorption of gold for coinage. The coinage turns the gold into money proper, and such a use of the gold does not take it away and hide it out of sight and make it impotent.

There is of course a loss of metal by wear and tear of coins every year, and a certain amount is really absorbed in manufactures and decoration. This is variously estimated at from £5,000,000 to £12,000,000 a year, and, whatever it may be, it is clear that this gold is removed from all influence on the money market and on prices.

The idea, however, seems to be that if Germany, Italy, and America had stuck to silver and shaky notes, we might have had more available gold here and in France; and in consequence a higher range of prices. This is certainly not clear as to the gold obtained by Germany, for much of that came, as has been said, from French hoards. It is not easy to say exactly what would have happened, had Germany taken no gold from France and had America resumed specie

payments on a silver basis. The important fact is that the supply of gold has sufficed to give to Germany, Italy, and America all the gold they have required for the modification of their currencies, and yet to leave to other countries ample working balances. It is also worth noting as to the American resumption that cautious people in London expected great pressure here in 1879, in consequence of American demands; whereas, in fact, 1879 was a year of extreme ease, following as it did on high rates of discount and considerable alarms during the autumn of 1878, when large amounts of bullion were attracted to this side.

It is quite clear that capital, in the form of money loanable for short periods, has been very abundant during recent years, even in countries like England, where a real scarcity of bullion at once acts upon the short loan market, and increases the rate charged for the use of "money." The average Bank rate of the past ten years has been slightly over 3 per cent., whereas it was more than 4 per cent. during the twenty preceding years, and the "market rate" for discount has been in recent years lower than the Bank rate in a larger proportion than was formerly the case.

If we want gold we have to raise the rate of discount to get it; and although, during the period in question, other countries have bought and used large amounts of gold, we have secured all that we have required at comparatively low rates. We have not perhaps wanted so much as on some other occasions, by reason of low values of produce, although this period has included times of great activity; but, at any rate, it is perfectly clear that the recent history of our money market affords no confirmation to the assertion that gold has become scarce. On the contrary, so far as it goes, the evidence points the other way, and tends to show that the supplies available have been more than sufficient, even for demands which have sometimes been of an extraordinary nature.

It is worth observing that our foreign trade has been transacted in recent years with a smaller proportion of actual shipment of bullion and specie than formerly. The total of our imports and exports from 1866 to 1875 was in round figures £6,000,000,000, and the total of bullion and specie

imported and exported was in the same period £530,000,000; but the total of our imports and exports from 1876 to 1885 was £6,700,000,000, and this vast amount was moved with the aid of £493,000,000 of bullion and specie. If we take the gold alone, we used about £327,000,000 in the former decade, against £278,000,000 in the latter. The figures of the total trade in the later period are somewhat misleading, as of course the trade was even larger than it seemed, if the amounts had been corrected for the fall of prices. So the diminished use of bullion is really more important than it seems.* (See Appendix C.)

* It is interesting to note that those countries which do the most trade are not those which require the most coin. For instance, Great Britain uses about £4 per head of her population, and France about £8, and, according to Mr. Mulhall's tables, the ratio of metallic money used in different countries to the total commerce of each country is as follows:—

					Per cent.
Spain and Portugal...	...	...	...	...	100
France ...	...	...	...	...	85
United States ...	...	...	...	...	58
Italy ...	...	...	...	...	40
Germany ...	...	...	...	...	34
Great Britain ...	...	...	...	...	20

We require the least coin, because we have developed our banking system so that instruments of credit do the work of money.

It is also well to notice that in our own home trade there is a marked falling off in the use of bills of exchange since 1874. There may be some reduction in the business done, but not sufficient to account for the change in the stamps used. It is more likely that loans from banks and book debts have taken the place of bills, and it is probably also the fact that many firms, having accumulated much capital, use much more cash than in past years, so that many payments are made at once which used to be deferred and drawn for. It is at any rate notorious that banks have long complained of the scarcity of bills, and the figures which follow quite explain that complaint:—

	1874.		1885.
Inland and foreign bill stamps...	£985,000	...	Inland... £342,132
Inland ...	...	...	Foreign £362,981
			<hr/>
Foreign estimated for 1874...	£303,000		
Inland ...	...	...	£682,000
			<hr/>
So that Inland have fallen since 1874 £240,000, or almost exactly one-half			£705,113

Those who are familiar with the course of the money market will remember that the semi-panic of the summer of 1875, when enormous failures took place, was surmounted without a high Bank rate, and that the feature of 1876 was an excessively low market rate—so low that vast sums of money were lent “at call” during long periods at half to one per cent. per annum, and this before the general fall in prices had taken place, and at the very time when the effect of German operations on silver was first fully felt, and the Indian exchange fell to 1s. 6d. the rupee.

Trade was no doubt depressed in 1876, and of course this was one cause of the want of demand for money, and the heavy fall in rates; but if gold were ever scarce, it should have become so when German demands had been so long “absorbing” bullion on all sides. The general opinion was that during 1873 and 1874 German demands had diminished supplies of gold here; but by 1876 this special demand seems to have ceased, and as soon as it ceased the market assumed an aspect of excessive abundance of loanable capital.*

* Mr. Giffen, in his second series of Essays on Finance (p. 80 et seq.), argues that the money market has been more disturbed since 1874 than was common previously—“feverish,” as he puts it. The basis of the argument is that there were high and low rates in the same year on several occasions, as, for instance, in 1875 and 1876.

Great difficulties were surmounted in 1875 by reason of an excessive supply of money throughout the year.

No one who really was engaged in the money market would ever speak of the money market as “feverish” in 1876. As a matter of fact, 1876 was, as above mentioned, a year of extreme ease in the money market. The same remark will apply to most of 1877; and as to 1878, there was no serious pressure until the failure of the City of Glasgow Bank and its consequences caused an alarm which would have ended in panic had there been any real scarcity of money.

Eighteen hundred and seventy-nine was another year of extraordinary ease in money, though the rate did rise in the autumn to 4½ per cent.

Mr. Giffen (p. 81) admits that the five years from 1880 to 1884 inclusive have been “less disturbed,” though it would seem that, if the supply of money from gold were then continually decreasing, the contrary result should have been experienced.

However explained, the fact remains that the years since 1873 have not been years of “feverish” money, if compared with former periods, say from 1856 to 1873, when gold supplies were very large, and, till

It is interesting, as showing the real condition of the money market, that in the decade from 1866 to 1875 inclusive there were 109 changes in the Bank rate of discount, whereas in the decade from 1876 to 1885 there were only 61 changes. The condition of affairs must have been far more "feverish" in the former than in the latter period.

The history of the great banks of Europe, during recent years, certainly lends no aid to those who dwell on the scarcity of gold, and even M. Cernuschi, the eminent advocate of bimetallism, in a letter to the *Economist* dated in April, 1886, says that the scarcity of gold is "purely imaginary," and he refers, in confirmation of this view, to the great store of gold now existing in the world.

The stock of the Bank of England (April, 1886) was £21,400,000, £4,000,000 less than in 1885; but the stock of the Bank of France was £51,800,000, showing an increase of £10,000,000 since April, 1885. The Imperial Bank of Germany had £34,000,000* (in gold and silver), and the Treasury and banks of the United States held about £65,000,000 (gold).

It is remarkable that while the stock of gold in the Bank of France has doubled since 31st December, 1881 (£25,800,000 in 1881, now—April, 1886—£51,800,000), her stock of silver has fallen £2,000,000—from £46,000,000 to £44,000,000.

The only material falling off in recent years has been in America, and that is far more than compensated by the great increase in Europe. Recent legislation, as well as the course of trade, has tended to cause an export of gold from the States to Europe.

The general result confirms the opinion of M. Cernuschi,

1871, excessive. Any one really engaged in the business of lending money can have no doubt on this head. There has been no "panic" since 1866, and this fact alone should be very instructive.

* According to Soetbeer (as quoted in the *Financial News*), the stock of money in circulation in Germany in January, 1886, was £133,000,000, against £87,000,000 in 1871. Of this, £87,000,000 was gold, against £4,500,000 in 1871, and £44,000,000 was silver, against £75,000,000 in 1871.

Therefore the increase of gold (£82,500,000) was £30,000,000 more than the decrease in silver. This does not seem to point to a great "scarcity" of the more precious metal.

and possibly it may be true, as he suggests, that, if we could turn every silver coin into gold it would make no difference in the total of available money, and ought not, therefore, to affect the condition of prices.

In much of the recent controversy, many writers do not seem to have dwelt sufficiently on the influence of the extended use of instruments of credit on prices. Formerly, much turned on the issue of Bank notes. It is not so now in our system. The amount of their issue is here strictly limited, and they do less and less of the work of the nation. Their total is as nothing when compared to the total of money needed for daily exchanges. Men confide in one another, and, when they confide, do not need the aid of cash. It is not, perhaps, true to say that England is fully "banked," but she is sufficiently "banked" to enable her to carry on a vast trade with very little money.

When credit is rampant, a great inflation may arise, and money may seem plentiful, and no doubt such a situation tends to enhance prices; but if prices are thus raised, their fall is certain when crisis and panic supervene on a collapse of credit. This is admitted, but it is argued that, as the structure of credit depends on the maintenance of a sufficient reserve of gold, any condition of things which makes it more difficult to maintain that reserve will tend to cause a fall in prices. As a matter of fact, the rate of money has never been more steady in England than it has been since the supply of gold has been diminishing—say from 1870 to the present time. Credit has fluctuated, but has never been excessively developed since 1866, and the supply of money in the discount market, as already stated, has been for the most part ample at low rates of interest. Every day there is an increasing tendency to use less cash in business, and the function of gold, however important, seems to be more and more confined to transactions entirely retail in their character, and to the maintenance of such reserves as may be necessary for the stability of credit.*

* Even in small transactions, men desire to dispense with metal, as we see in the wide use of £1 notes in Scotland and Ireland, where gold is seldom seen (except in the form of half-sovereigns), and in the great expansion in the use of Postal Notes since 1880. Englishmen

At least 99 per cent. of the real business of the country is effected by instruments of credit, if we include in that expression Bank notes of all sorts ; and, apart from Bank notes, the vast mass of important exchanges takes effect without the use of any "money" whatever. No one, in deciding what price he will give for any article, ever thinks of the question whether it may be easy or difficult to procure the money required, except during a panic or so far as his own credit may be affected by his own condition. The means of exchange are always at hand for the solvent man. Scarcity of gold is never referred to, for gold is not used in transactions of any consequence. The cheque or bill does the work as effectually as sovereigns could do it. If a man's credit is weak, because credit is restricted, he may refuse to enter on a transaction which he would otherwise accept gladly; and, on the other hand, if credit be easily obtained, he will do what he would otherwise refuse ; and so prices are affected by credit, because the condition of credit affects the condition of men's minds. But it may well be doubted whether the state of the mines is much considered by traders in ordinary times.

It is curious that prices should vary so little as between France and England, though customs as to the use of instruments of credit and money vary so much. For instance, in the Bank of France it is found that about 44 per cent. of transactions are effected by means of notes and cash, whereas, in London banks, only 3 per cent. are thus effected, the cheque system being little used in France as compared with England. It would seem to follow from this, that the general movements of prices depend less on customs as to the use of money than on other causes. And this tends to confirm the observation before made, that men, in considering values, think rather of supplies and demands of goods, than of facts as to money. The Frenchman keeps money and depends on it. The Englishman uses credit instead of money and depends on it, just as much as if it were money.

Taking our own country alone, we often turn over as

are forbidden the use of £1 notes for some inscrutable reason, but they show plainly, by their disposition towards Postal Orders, how convenient is representative money, even in small affairs.

much nominal money in the London Clearing House in a single week as the whole amount of gold coin and bullion supposed to exist in the kingdom, and to this must be added the great sums moved in the country without coming in any form to London. This fact ought to bring home to the mind the slight importance of cash as a factor in the transactions of a great commercial people.*

No one would assert that the amount of money in a country at any given time has no influence on prices; but, granted the fact that for years no scarcity of money for purposes of exchange has been felt, it may well be asked whether, at such a time and in such a situation, price depends much on facts as to supplies from the mines. If the time should come when lessened supplies from the mines take the form of lessened reserves, lessened credit, and lessened facilities in the money market, as evidenced by high rates of discount, then indeed prices may come to be affected, for demands for goods will probably lessen, even if supplies continue. You may, however, have high rates of discount with rising prices, as in 1864-66, or you may have low rates and falling prices, as in recent years. In both cases there were special causes affecting prices, apart from money markets. All that one can say is, that the tendency of scarce money and high rates of discount should be towards falling prices, and the tendency of plentiful money and low rates should be towards higher prices; but it has often happened that other tendencies have been stronger than those arising from facts affecting money, and so the course of prices has seemed to baffle calculation.

Mr. Giffen, in the Essay already mentioned, argues as to the importance of bank reserves as a factor in prices. But he seems to ignore the fact that while our Bank reserve in England has been barely maintained, the gold reserve of

* Compare the observation of Mr. E. Atkinson as to the United States of America ("Distribution of Products," p. 211).

"Three hundred million dollars of gold coin suffices as the standard by which to measure 300,000,000,000 dollars' worth of purchases and sales every year.

"By the use of notes issued by, or cheques drawn upon, banks and bankers, more than 100,000,000 tons of food are moved in each year from the producer to the consumer, and thus the subsistence of 50,000,000 people is assured."

the Banks of France and Germany has largely increased—a fact of much importance when money markets are so closely associated, and when transmission is so easy and rapid. It is perfectly true that, as we work with little cash in hand, our market is more sensitive and more affected by slight movements of bullion than are the great markets abroad, where cash is so largely used and retained. Slight changes in the reserve act quickly here, because they soon affect the expectations or fears of borrowers and lenders. But it is difficult to believe that these changes have just the same effect now as they would have in times when the Banks of France and Berlin were scantily supplied with gold.

Mr. Giffen argues that if the reserve is not kept up here values must decline, and, if necessary, rates of discount must be raised in order to secure the decline. Again, he says that, as increase of population and wealth demands more cash for the transaction of business, if fresh supplies of cash do not come to us in ordinary course, rates of discount must rise and values fall. But, recently, values have fallen without any serious advance in the rate of discount, with, in fact, a low average rate of discount. The old machinery does not work, for on several occasions the Bank has failed to raise the rate of discount, even when disposed to do so. It may be said that rates have not risen, because other causes have produced a fall of values which has brought about an "adjustment." If that be so, it seems to follow that other causes have been more powerful in causing changes of price than any changes affecting supplies of money. But it would be more correct to say that the supply of cash outside the central Bank has been so great, that permanent advance of rates of discount was impossible. The peculiarity of the money market in recent years has been that, with a very moderate reserve, we have often had very low rates of discount—a condition of things which would not of itself tend to lower values; but values have fallen. It is hard to see how it can be said that want of cash for any purpose has led to the fall in such cases.*

* Generally speaking, the rate of discount depends, not on abundance of gold or silver, but on the organisation of credit, so that we see

If it be true that gold has not become scarce, and that we cannot safely argue that prices have fallen in consequence of such scarcity, the question will be asked—What then are the causes which have led to the serious fall which has occurred in the price of many articles of great importance?

The following table gives the changes from 1873 to 1886, in the cases most frequently referred to :—

the lowest rates in those countries where there has been a comparatively small amount of bullion or coin. Compare, for instance, England and France. France has probably two or three times as much cash as we have ; but if we compare the rates charged from 1844 to 1877 by the Banks of England and France, we find that the Bank of England was at 3 per cent. for 2,682 days, and the Bank of France for only 1,518 days ; and the Bank of England was at 2 per cent. for 1,391 days, and the Bank of France for only 270 days. (See Mr. Inglis Palgrave's tables, published in 1878 ; and see also M. Y. Guyot's very interesting chapter in the third book of his "Principles of Social Economy.")

Mr. Giffen admits (*ib.*, p. 55) that a fall of price may arise from "over-production," or lessened cost of production, which will "ease" the money market, and prevent a rise, or produce a fall, of rates. Or a rise of prices in articles may occur when gold is flowing in, but not caused by the influx of gold, and the consequence will be greater demands for cash, and possibly higher rates of discount. Through "wages and profits" prices are affected, for "prices are only wages in another form," and so by changes in wages and profits, differences arising from scarcity and abundance of gold may be adjusted without changes in the short loan market.

Mr. Giffen, in fact, admits the importance of "other changes of prices" apart from "changes in credit prices;" but then these other changes in prices depend on "wages and profits," and these depend on "the quantity of gold in use," so that it comes to this—that all changes of prices depend on the "quantity of gold in use."

This argument seems to beg the whole question, for it seems to be assumed that prices depend on wages and profits, and that wages and profits must vary with the cash in the reserves of the country. The contention here made is intended to show that other elements, besides those enumerated by Mr. Giffen, have in fact affected, and do still affect, prices.

TABLE OF PRICES IN 1873, 1879, 1884, 1885, AND 1886.

	1873. (Goschen.)	1879. (Giffen.)	1884. (Economist.)	1885. (Economist.)	1886. (Economist.)
		Jan.	Jan.	Jan.	April.
Coffee (cwt.)	... 87s. ...	65s. ...	70s. ...	57s. 6d. ...	62s.
Cotton (lb.)	... 9d. ...	5½d. ...	5½d. ...	6½d. ...	5d.
Coals (ton)	... £1 10s. ...	19s. ...	17s. ...	17s. 6d. ...	15s. 6d.
Copper (Chili) (ton)	... £91 ...	£57 ...	£58 ...	£48 ...	£41 10s.
Iron (Scotch) (ton)	... £6 7s. ...	£2 3s. ...	£2 3s. ...	£2 2s. ...	£1 18s.
Lead (ton)	... £21 10s. ...	£14 10s. ...	£14 ...	£11 ...	£14
Tin (ton)	... £142 ...	£65 ...	£90 ...	£75 ...	£92
Butter (cwt.)	... 116s. to 120s. ... 130s. to 138s. ... 124s. to 128s. ...				112s.
Beef (per 8lb.)	... 4s. 9d. ...	5s. 2d. ...	5s. ...	5s. ...	5s.
Cheese	... 60s. to 62s. ...	62s. to 64s. ...	58s. to 60s. ...		
Wheat (quarter)	... 56s. ...	39s. 7d. ...	39s. ...	32s. 6d. ...	30s.
Silk (lb.)	... 15s. ...	15s. ...	15s. ...	13s. ...	14s.
Sugar (W. India) (cwt.)	29s. ...	17s. to 20s. ...	16s. to 19s. ... 9s. 6d. to 12s. ... 12s. to 13s.		
Wool (Sydney) (lb.)	2s. ...	1s. 7d. ...	1s. 5d. ...	1s. 4d. ...	1s. 4d.
Tallow (Australian) (ton.)	... 38s. ...	41s. ...	32s. ...	22s. ...	

The first observation is that it seems impossible here to find any law as to the fall. The fall appears to be spasmodic and uncertain, which it should not be if it be caused by a continuous and increasing scarcity of the means of effecting exchanges.

We are, however, referred to Index numbers as proving a fall which is general and persistent. These numbers are very misleading, as articles small and great are treated as of equal importance—indigo and wheat, for example. Recently we have received a table where the numbers are, as far as possible, corrected so as to embrace the consideration of “relative importance,” as well as mere price. These figures are given in tables 26 and 27 of Appendix B to the third report of the Commission on Depression. They are prepared by Mr. Nash under the direction of Mr. Inglis Palgrave. He takes the average prices from 1865-69 of the twenty-two articles chosen to form the *Economist* Index number, as his “datum line.” Treating each article as of equal importance, we get a number in 1869 of 2,200 = 100, and in 1885 a fall to 1,550, or 70, but the corrected figure is 1,669 or 76. The corrected figure of 1877 was 2,205 or 100, being 7 per cent. higher than that of 1871, and the figure of 1881 was the same as that of 1871, and the very heavy fall only begins after 1883, the figure for which was 88, whereas the figure of 1884 was 80, and that of 1885 was 76.*

This gives a fall of 12 per cent. in two years, and it is very hard to attribute such a change to any possible alterations in gold supply in such a period.† These peculiarities become more interesting when we look a little further into details.

The change in the price of wheat is very curious. The price of January, 1879, was 39s. 7d. a quarter; of January, 1884, 39s.; January, 1885, 32s. 6d.; and of April, 1886, 30s. No change of importance occurred from 1879 to 1884, and no one would suggest that the fall of 1884 was caused by scarcity of gold.

* It may, perhaps, be doubted whether the prices from 1865-1869 form a very satisfactory datum line, as they are a good deal affected by the price of cotton.

† Compare, as to fall of Indian prices in 1884 and 1885, Barbour on Bimetallism, p. 93.

Take sugar again. It did not fall much between 1879 and 1884, but West India sugar fell from 16s. to 19s. per cwt., to 9s. 6d. to 12s. before January, 1885, and it remains much the same in 1886. But in 1884 we received $7\frac{3}{4}$ million cwts. of unrefined sugar from Germany, as against $4\frac{1}{2}$ million cwts. in 1882; and the production of beetroot sugar increased from 1,393,000 tons in 1879 to 2,500,000 tons in 1885. In the same period, the production of cane sugar increased slightly, but the total sugar production of the world increased more than 30 per cent. These figures account readily for the fall. The trade has, in fact, been upset by bounties offered by over-anxious Governments, as well as by an enormous natural increase of supply.*

* I take the following figures as to the import of sugar into the Clyde from the *Financial News* of the 17th of April, 1886:—In 1858 the first 200 tons of beetroot sugar were imported—the total import of sugar for the year being 70,000 tons. Last year 241,000 tons came into the Clyde, 158,000 being beet, and 83,000 cane.

In 1879 only 40,000 tons of beet sugar were delivered in the Clyde. In 1869 the total beet sugar crop of Europe was estimated at 659,000 tons, and last year at 2,546,000 tons. The deliveries of West India sugar fell from 37,000 tons in 1879 to 11,000 in 1885.

Prices of sugar, 1830 ...	...	...	£50	a ton.
" 1840 ...	...	...	£40	"
" 1881 ...	...	...	£25	"
" 1886 ...	...	...	£16	"

Consumption, 1884-1885.

Beet	2,500,000	} tons.
Cane	2,170,000	

The following facts, extracted from a single impression of the *Times* (19th April, 1886), illustrate strongly the extraordinary supplies of the present time:—1. As to wheat in India, the estimated area under wheat on 22nd March, in the Punjab alone, was 6,700,000 acres, about $2\frac{1}{2}$ times the whole area under wheat in the United Kingdom. 2. As to wool, Messrs. Windeler, in their circular, say: “Colonial wool is cheaper now than at any time within the memory of the present generation. . . . Production during the interval (since 1848) has increased nearly tenfold in the case of Colonial wool, while, as regards River Plate wool, this industry now represents a total probably equal to the entire Australian clip, and has more than doubled during the last twenty years. . . . There are special circumstances affecting Colonial wool at the moment. First, the rivalry with River Plate wool has reached an acute stage. Secondly, the fact that the

Copper was about £90 a ton in 1873, £57 in 1879, £65 in 1883, and £41 in 1886, in face of a great demand, but supplies have been, and are, so large (say 47,000 tons in 1850 and 210,000 in 1884) that the fall surprises no one.

So of iron and coal. Scotch pig iron fell from £6 7s. per ton in 1873 to £2 9s. in 1883, and £1 18s. in 1886; but the production of iron was 9,392,000 tons in 1868, and 20,410,000 tons in 1883, so that a fall was inevitable sooner or later.

Coal was £1 10s. per ton in 1873, 18s. in 1883, and 15s. 6d. in 1886, with enormous stocks. The production is said to have quadrupled from 1850 to 1883. The prices of iron and coal from 1871 to 1874 afford a remarkable illustration of fluctuation arising from special demands. No doubt the Franco-German war was one great cause of this change, as it produced a great stagnation in two great countries of the Continent, and so led to an extraordinary demand for our manufactures and an unusual consumption of coal and iron. There may have been other causes for the rise, but, at any rate, gold had nothing to do with it, as the serious falling off in supply had then already commenced.

No survey of recent prices would be complete without some allusion to those articles which have not fallen during the period here considered. During a quarter of a century, until within the past two years, meat has remained dear. The consumption has greatly increased since the repeal of the Corn Laws, but supplies have also increased from foreign countries. We import ten times as much as we did thirty years ago (447,000 tons against 44,000); but our population has increased, and our people consume 105 lbs. per head per annum, against 81 in 1855, and, as our chief supply is still

production of Merino wool is now for the first time in excess of the powers of consumption." Since July wool has advanced rapidly.

Our markets have begun to feel an influence of supplies of wheat, even from countries so distant as Australia and New Zealand. It may be worth noting that in the present year New Zealand papers mention most extraordinary results of the harvest just completed. One paper, dated 19th February, mentions 60, 50, and 72 bushels of wheat to the acre. Another, dated 24th February, mentions 90 and 70 bushels. In a third paper, 100, 86, and even 116 bushels of oats to the acre are recorded near Tanaka and St. Andrews.

produced at home, prices have advanced while other food has fallen. The advance is most natural, if one considers the ordinary factors of supply and demand; but if gold were really appreciated from scarcity, it is hard to account for such an advance, when other articles of food have fallen spite of a greatly increased demand.

The prices are as follows in London :—

				Beef per ton.
1841-50	...	...	...	£56
1851-60	...	...	...	£61
1861-70	...	...	...	£65
1871-80	...	...	...	£79
1881-84	...	...	...	£84

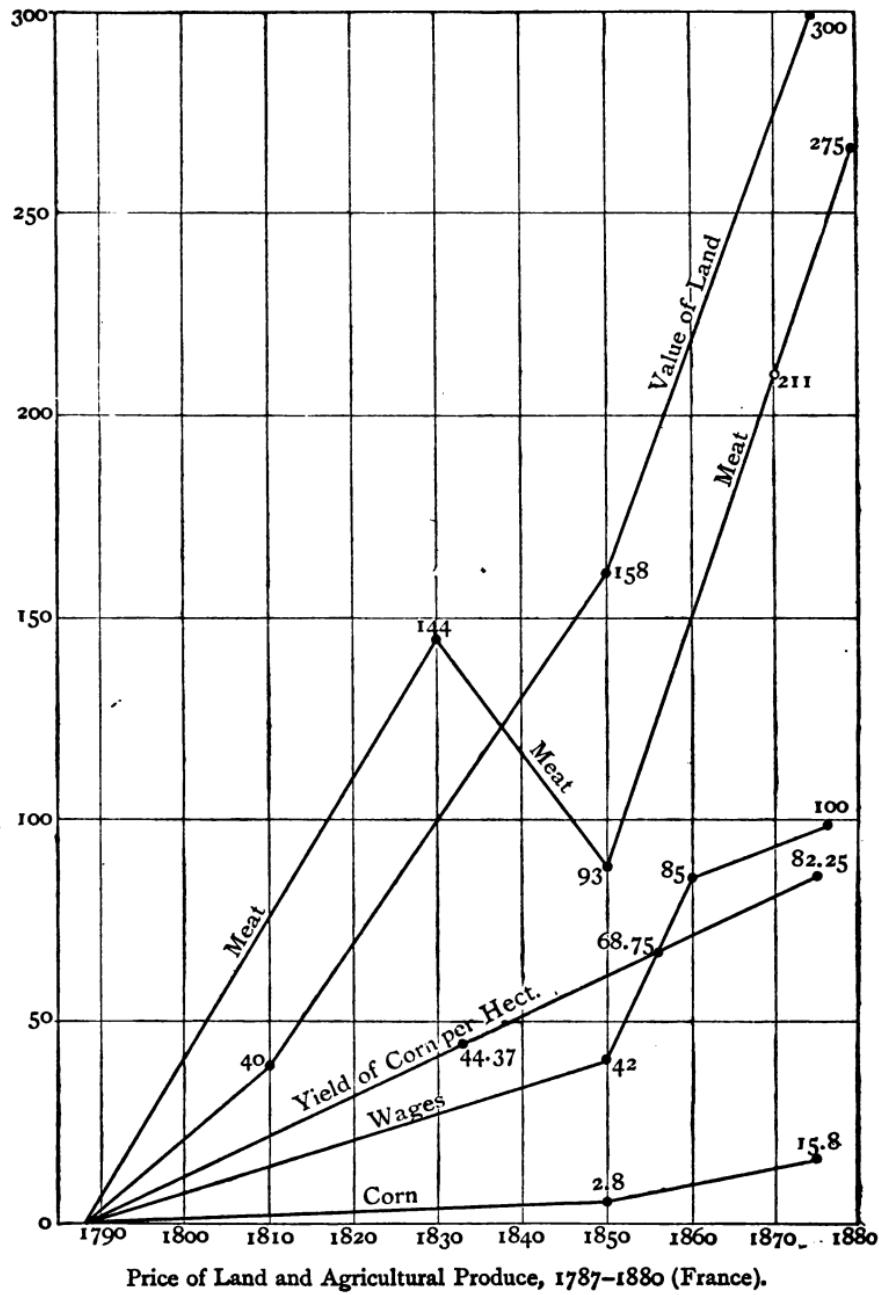
Meat is not the only article the price of which has risen since 1854, during which time so many have fallen.

Taking all the agricultural products of Ireland, Mr. H. V. Stuart gives the following figures :—

United totals of minimum prices 1850 to 1855	...	£145	0	2
„	1860 „ 1865	...	212	6 11
„	1870 „ 1875	...	264	13 9
„	1880 „ 1885	...	224	13 5
„ maximum prices 1860 „ 1865	...	305	6 11	
„	1880 „ 1885	...	398	13 8

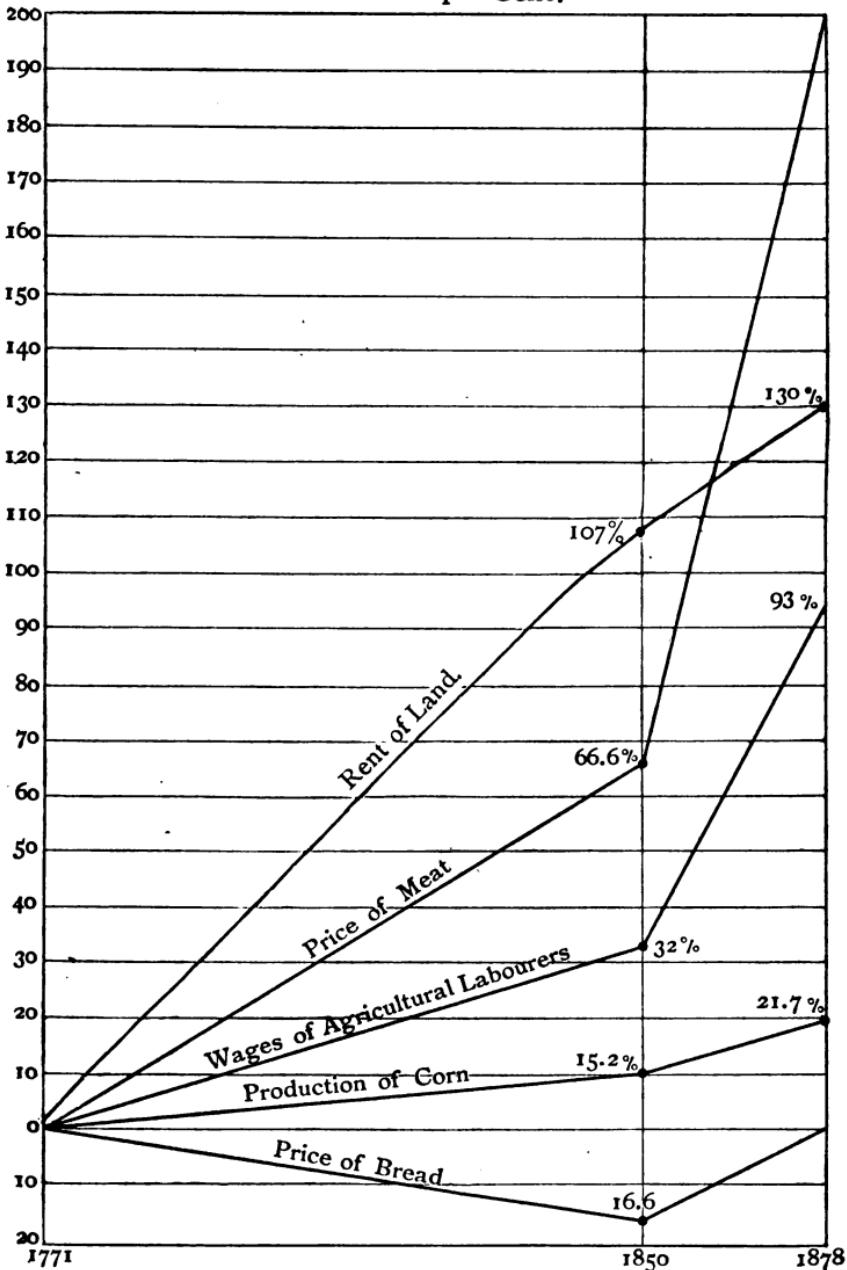
(See "Prices of Farm Products in Ireland," p. 19.)

The following Diagrams, which are taken from M. Guyot's "Principles of Social Economy," pp. 95 and 98, afford an interesting illustration:—



Price of Land and Agricultural Produce, 1790-1880 (France).

Increase per Cent.



Price of Land, of Agricultural Products, and rate of Agricultural Wages, 1771-1878 (England—Caird).

Taking 50 British imports as given by Mr. Mulhall ("History of Prices," p. 180) and taking the Index number of the prices of these from 1854-60 as 100, we find in the following cases an advance in 1884 as compared with 1854—

	1854	1884		1854	1884
Bacon	78	96	Eggs	80	123
Beef	95	127	Hides	71	97
Brandy	89	96	Oats	103	111
Butter	81	119	Oxen	75	138
Cheese	90	102	Pepper	102	145
Cocoa	60	165	Potatoes	85	192
Coffee	94	135	Raisins	86	91
Cotton	88	93	Sheep	72	110
Currants	61	75			

In the same way, if we take 50 British exports, and compare the prices of 1854 and 1884, we get the following exceptions to the fall—

	1854	1884		1854	1884
Beer	95	110	Salt	109	118
Cloth	89	152	Silks	100	103
Firearms	72	104	Spirits	133	165
Fish	84	100	Yarn (cotton)	92	100*
Horses	88	100	," (linen)	100	108
Leather	95	107			

There is here a list of exceptions so long as to lead to caution in speaking of any prevalence of depression amounting to a law. No doubt there are special causes for the rise in each case. That is not disputed, but so are there special causes accounting for a fall in other cases. Some articles rise and some fall according to supply and demand, and many new and most important influences which affect supplies and demands have arisen in our own time, as will be seen hereafter. †

* Cotton yarn has fallen much since 1884.

† Compare the remark of Professor Marshall (Appendix C. to third Report of Commission on Trade, p. 423). "It is beyond question that changes in the supply of gold are not accountable for more than a very small part of the total fluctuations in the general purchasing power of money."

No allusion is made in the text to the great rise in the value of real estate (land and houses) which continued up to 1876 or 1877.

Before, however, dealing with these, it may be instructive to refer to some cases of great fluctuation in price in former periods, before the discovery of the great gold-fields of California and Australia.

There was an enormous rise of prices from 1789 to 1809, by some attributed to war and by others to a great abundance of gold and silver in Europe (although there were no new supplies of much importance during that period); and there was an equally remarkable fall in the next twenty years, from 1809 to 1829. This is usually attributed to increase of population and trade, without any increase of importance in gold or silver. Again, by 1839 there was another sharp rise, attributed by Mr. Jevons to "general expansion of trade and credit;" but by 1849 there was a fall, even more extraordinary, attributed to a "collapse" of trade and credit.

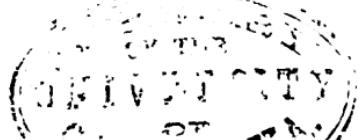
The potato-famine, the panic of 1847, and the revolution of 1848, were all included in this decade, and would seem to account for much decrease of business and a lessened demand for most articles of commerce.

The year 1849 marks about the lowest point of the low prices before the gold discoveries, and the history of these previous changes ought to make it very clear how great may be these fluctuations, even when supplies of gold and silver remain comparatively stationary.

The figures of this period are thus summed up by Mr. Jevons in his "Investigations," published after his death:—

Year.	Average ratio of prices to prices of 1849.			Year.	Average ratio of prices to prices of 1849.		
1789	133	1829	...	...	124
1799	202	1839	...	...	144
1809	245	1849	...	...	100
1819	175				

Recently that advance has been more than lost, but real estate continued to rise after circulating capital in the form of goods of various kinds had begun to fall. And yet, if gold were really scarce, such property as land should have felt it quickly. Bad seasons and low prices of many products and dearer labour have caused so many failures amongst farmers that rents have fallen and land in many localities is now almost unsaleable; but the history of this fall is not like that of the fall in goods. The one has followed on the other, whereas they should have begun together had they been the results of a common cause.



This very interesting period is in part discussed by Mr. Tooke in his "Essay on High and Low Prices," published in 1824. He shows how the great war had tended to raise prices by checking production at home and lessening importations from other countries, through prohibitions and heavy freights and charges. But a most careful analysis of many changes results in the conclusion that the ups and downs depended, not on greater or smaller issues of notes or exportations of gold during the suspension of cash payments by our Bank, but on supplies and demands, consequent partly on seasons and partly on mercantile speculations, of which there was a plentiful supply when fluctuations of price were so rapid and so serious.

For instance, there was a prodigious advance in 1817, simply in consequence of a very bad harvest in 1816, and prices remained high throughout 1817 and 1818; and they afterwards fell rapidly, but not, as he shows, by reason of any deficiency in available money, but from natural causes and a collapse of a great speculation. Not only was the supply of corn great, but the imports of other productions had been enormous after the peace.

The net imports of "Colonial and Foreign Productions" were in—

1816	...	...	...	...	£11,306,000
1817	...	...	...	...	17,704,000
1818	...	...	...	...	23,019,000

A similar collapse had already taken place in 1810 and 1811, but without teaching prudence to speculators, encouraged by Napoleon's famous system, which added so many elements of uncertainty to all transactions.

Mr. Tooke's remarks on this last period are very important and instructive. He says ("High and Low Prices," part I., page 182):—"It is sufficient to remark that the more the instances of a rise in prices are examined into, the more clearly will they be found to be explained upon scarcity from seasons and political obstructions, or extra demand from peculiar and temporary causes. But it is material to observe that while such great stress has been laid on the circumstance of many articles having risen in

price between 1808 and 1814, no attention seems to have been paid to the great and long-continued depression of other articles.

“Colonial produce was in several instances lower than it had ever been before. Moreover, various kinds of raw materials, imported at most extravagant rates, were sold in 1810, 1811, 1813, and 1814 at prices that would not pay more than the mere charges.

“Now, if from these reduced prices be deducted 20 per cent., as about the difference between paper and gold, it will leave so low a range, that, applying the same rate of reduction to the highest prices at which any considerable quantities were sold in 1808, 1809, 1812, and 1813, the average will afford a result of very moderate metallic prices, by no means justifying the inference of any diminished value of gold and silver, but rather the reverse.”

In the *Edinburgh Review* for January, 1886, and in the article of M. de Laveleye in the *Contemporary* for May, 1886, much stress is laid on the condition of prices and of commerce in the decade from 1820 to 1830, as throwing light on present depression.

But it would seem difficult to draw any sound conclusion from a period so different in its characteristics from our own. The period in question began with low prices, which were caused by very abundant supplies, as explained by Mr. Tooke, and, notwithstanding the supposed depressing effect of such prices, they were followed by one of the most extraordinary spasms of speculation ever known in this country—a speculation which ended in the crisis of 1825, and a multitude of serious failures, especially of banks. This fact does not appear to be referred to in either of these articles, and the omission seems to throw great doubt on reasoning which seems intended to convince us that low prices are simply destructive of all enterprise, and, therefore, amount to a calamity. (See Appendix F.)

It is quite true that this view of the case would not apply to Italy and other countries which were not affected by our disasters; but it is equally clear that the mere existence of low prices will not of itself discourage active exertions by traders, and it is notorious that great speculations sometimes originate from the fact that prices are low, and

that, therefore, stocks can be procured at a comparatively small outlay, and held at a comparatively small risk. The existence of depression now may be admitted; but it is contended that it is most unsafe to compare this period with 1820, as if the depression of 1820 was permanent, and had not been followed by a sudden revival here, and as if it were possible to compare the state of commerce just after the great war and before the discovery of the locomotive with the condition of things with which we are now familiar.

If any comparison were to be made, it would be more fair to suggest that if such a depression as that of 1820 were soon surmounted under conditions so unfavourable as then existed, we might naturally look for an even more rapid recovery in the present condition of trade. But the fact is that even that comparison would be unsafe; for, if many things now tend towards recovery, on the other hand existing conditions, as we shall see, tend to encourage competition, which was unknown in former days.

The following extract from Tooke's "History of Prices," vol. ii., page 139, seems strongly to confirm the argument here used:—"Credit had been restored, and the general circulation had been consequently enlarged, more especially as compared with the autumn of 1825, when the prices of wheat and of corn generally were from 20 to 30 per cent. higher than in the last six months of 1827. If the facts here adduced should not be deemed sufficient they might be multiplied without end, in proof of the utter want of connection in the relation of cause and effect between the state of the corn markets and the state of the circulation, from the commencement of 1823 to the close of 1827." And yet this is the very period chosen by these high authorities to encourage us to attribute the recent fall in prices to changes in the supplies of money throughout Europe. Their mistake seems to arise from an imperfect consideration of the facts which have been so carefully analysed by Mr. Tooke, from whom one more extract may be fairly given. He says (vol. ii. page 188):—

"It is perfectly within general recollection that this great enlargement of the Bank issues" (in February, 1826) "had not the effect of arresting the fall of prices. . . . But it has not been so well recollected nor understood that a

similar enlargement in 1810, which was represented as an inundation of paper, causing an advance of prices, was issued under circumstances singularly analogous, having been in fact coincident with a great fall of prices and a great failure of private credit."*

* It can hardly be disputed that fluctuations of price were more severe in former than in recent times, the influence of modern discovery tending towards far greater uniformity of supply in different parts of the world. At any rate, fluctuations were formerly excessively rapid and violent, as may be seen throughout Tooke's great work.

If supplies fell off, they could not easily be filled up before the days of steam and telegraph, nor could a superabundance be easily removed.

So, in the early days of the century, a good harvest would cause a terrible fall in corn, and a bad year would be followed by famine prices. The history of British India is full of illustrations of an excessive diversity of price under one Government, and there can be no doubt that the railway, the steamer, and the telegraph have done more to prevent local famines than any action of Governments.

The following is a good illustration of the general remark made above (see Tooke's "History of Prices," vol. i., p. 235):—

	1798-9.	1800-1.
Coffee, per cwt.	185s. to 196s.	116s. to 130s.
E. India sugar	96s. to 115s.	50s. to 70s.
Cotton, per lb.	3s. 6d. to 4s. 6d.	1s. 6d. to 2s. 8d.
Tobacco, per oz.	11½d. to 16d.	4d. to 5d.

A few prices from 1782 to 1822 may be interesting:—

	1782.	1800.	1810.	1822.
Cotton (W. India) (lb.)	2s. to 3s. 6d.	2s. 3d.	2s.	11d.
Copper (cwt.)	...	84s.	140s.	160s.
Iron (ton)	...	£6	£5 10s.	£8
				to £12 in 1825.
Rice (cwt.)	...	25s.	40s.	30s.
		(Duty 7s. 4d.)	(Free)	
Sugar (Jamaica) (cwt.)	50s.	35s.	40s.	30s.
		(Duty 12s. 3d.)	(Duty 20s.)	(Duty 29s.)
Tea (Congou) (lb.)	5s.	5s.	3s. 6d.	3s.
			(96 p.c. Duty.)	(100 p.c. Duty.)
Wheat	50s.	100s.	90s.	40s.
Wool (Spanish) (lb.)	3s.	4s.	10s.	3s. 6d.

(See Tooke's "High and Low Prices"—Appendix F.)

It is natural now to state some of the peculiar events of our own times which have tended to reduce prices.

(1) The first great cause seems to be the increase of competition both in Europe and America, and even in the East. Recent consular reports lay great stress on the activity of German manufacturers and their skill in extending their business. They seem more industrious and better informed than our own people, and to aim at adapting themselves to their customers, both in offering low prices and goods suited to varied demands. France is often quoted as a serious competitor, both in silk and woollen goods, and even India is regarded with anxiety by many. It is needless to refer to America, whose people are distinguished for their ingenuity and activity. The important point consists in the fact that we have now had a long period of peace, so that our competitors have been able to operate without hindrance.

During her great war, America was unable to be a serious rival, and there can be no doubt that the great European war of 1870-71 destroyed for the time many competitors, and thus lessened the force of a competition which is now fully felt.

Thus peace has tended to lower prices by increasing competition.

(2) But far more potent even than competition from without has been that competition at home which has arisen from inventions which have increased production or lessened its cost, or have greatly reduced the cost of distribution by low rates of carriage and saving in the use of capital.

The great cause of causes has been the development of steam power. No accurate estimate can be made on such a matter, but it is said that the available power now in use by man is six times what it was in 1850.

Wages have greatly increased, but the cost of doing a given amount of work has greatly decreased, so that five men can now do work which would have demanded the labour of eight men in 1850. If this be correct, the saving of labour is 40 per cent. in producing any given article. The amount of saving will, of course, vary according to the

subject matter ; but it must be great throughout, and must involve a great lessening of cost, and therefore, other things being equal, of price.

The history of the manufacture of iron and steel affords a striking illustration. It is supposed that five times as much iron is now consumed as was consumed in 1850, but the price is lower than ever, thanks to an enormous production everywhere. Germany, France, and America have increased their production more rapidly even than England, as in 1850 they produced but little. The general result is a production so great as to leave little profit to the producer, and no industry at this moment is more depressed than that which is most vital to the progress of all other industries.

According to the high authority of Sir Lowthian Bell, the consumption of fuel in smelting pig iron is only one half what it was formerly—*i.e.* a ton of iron can be smelted by the use of two tons of coal instead of four tons, the coke used being reduced to its equivalent in raw coal.

There is another economy arising from the fact that the new enlarged furnaces will turn out 500 tons of pig iron per week, instead of 80 to 100 tons turned out by the old small furnaces ; and the labour employed at each furnace is not more than one-third of what was necessary when the small furnaces were used with the cold air blast.

It is needless to do more than refer to the great importance of the Bessemer process, and other inventions relating to steel. At this moment the price of steel rails is about £3 12s., as against £17 10s. in 1864, and it is said that English makers have offered to deliver steel rails in Canada at £4 4s. per ton, a lower price than can be offered even by makers in America. The price is less than half the price of iron rails a dozen years ago. At the same time it is notorious that there is a decided economy in the use of steel instead of iron in rail-making. No one knows exactly how much longer a steel rail will last than an iron one, but it is clear that the difference is great, so that the make of iron rails has almost ceased.

The like change is to be noticed in other industries.

Steel is now much used for shipping,* for boilers, and in many other directions, so that a great economy in the use of iron is secured; and at the same time the improved material is supplied at prices which, a few years ago, would have been thought absurdly low even for ordinary pig iron.

Perhaps, however, nothing has so strongly tended to cause a fall in iron as the discovery of new and cheaply-worked supplies of iron ore, both here and abroad. Many old supplies have fallen off, but the general increase has been very great:—

		1860.	1870.	1884.
North-Eastern				
District	(Tons of ore)	1,483,000	4,297,000	6,103,000
Scotland	„ „	2,150,000	3,500,000	1,885,000
Wales	„ „	715,000	619,000	95,000
Staffordshire	„ „	1,523,000	1,360,000	1,873,000
Cumberland	„ „	989,000	2,092,000	2,595,000
Lincolnshire	„ „	112,000	1,009,000	2,628,000
Derbyshire	„ „	875,000	384,000	19,000
Shropshire	„ „	165,000	337,000	198,000
West Riding	„ „	255,000	307,000	167,000
Sundries	„ „	252,000	464,000	570,000
Imported	„ „	23,000	208,000	3,153,000

The importation of foreign ore consists chiefly of hematite; but there has been an enormous extension of the iron industry in other countries, which must tend to keep down prices.

The following figures show how important is this consideration:—

	1870.	1875.	1880.	1884.
	Tons.	Tons.	Tons.	Tons.
Nett iron received from U. K. by foreign nations.	3,472,000	3,088,000	4,428,000	4,308,000
Make of foreign nations.	5,602,000	7,268,000	10,328,000	12,469,000
Total consump- tion by foreign nations.	9,074,000	10,356,000	14,756,000	16,777,000

* Gross tonnage of ships built of steel:—

1877.	1880.	1884.
1,118	38,164	151,339

(Sir L. Bell, "The Iron Trade of the United Kingdom," p. 23.)

So there has been a falling off in our export since 1880, but a marked increase in the total consumption outside the United Kingdom.

Sir L. Bell estimates (p. 58) the progress of the trade here and abroad as under :—

Per cent. of total make—	1870.	1875.	1880.	1884.
Great Britain	51·6	46·7	42·9	38·5
All other countries	48·4	53·3	57·1	61·5

The increase since 1870 is as follows :—

Great Britain	100	106·7	129·9	131
All other countries	100	138·6	197	237·9

It must not be forgotten that the home competition has been greatly increased by the existence of limited liability, and the consequent use of great sums of capital in the trade, which, but for the altered state of the law, would certainly not have been so applied. The money once so invested cannot be withdrawn, and companies work on, without profit, or at a loss, to the great injury of their shareholders and of the trade.

The production of coal has quadrupled since 1850, and the price, since the sudden advance of 1870-72, has fallen to a lower level than ever.

Invention has not in this case materially assisted production,* but the introduction of capital, in consequence, partly of the high prices of 1872-73, and partly of limited liability, has tended to maintain the output even at a loss ;

* The following figures show the tons wrought per hewer per shift :—

Year.	Tons wrought		Year.	Tons wrought	
	Per Man.			Per Man.	
1871	...	4·57	1882	...	4·11
1872	...	4·46	1885	...	3·95
1879	...	4·21			

The cause of the reduction is the working of thinner seams, which involve more labour per ton raised.

and thus, though the consumption has increased enormously, it has been far more than overtaken by production.

The cotton industry affords a good illustration of like changes. The price of raw cotton is about the same as in 1850, but the cost of cotton cloth has fallen at least 10 per cent. by reason of improved processes and decreased cost of production. The crop has increased prodigiously, especially in the United States, where it has doubled since 1860; but the demand has increased as rapidly, so that, but for many labour-saving inventions, the price of cotton clothing must have increased. The result is well shown in the figures given by Mr. Atkinson ("Distribution of Products," p. 119) as to factories in New England (see Appendix D):—

Yards per operative per year :

1830 ...	...	4,321	1880 ...	...	28,000
1850 ...	...	12,164	1884 ...	...	28,032
1870 ...	...	19,293			

Cost of labour per yard :

	Dollars.		Dollars.
1830 ...	1,900	1870 ...	1,425
1850 ...	1,556	1884 ...	1,070

Comparison of 1830 with 1884 :—

Operatives per 1,000 spindles, 1830	..	..	49 }	Decrease,
" " 1884	..	..	17·2 }	64 per cent.
Pounds per operative per day, 1830	...	...	9·94 }	Increase,
" " 1884	...	...	31·26 }	214 per cent.
Wages per operative per year, 1830	...	...	\$164 }	Increase,
" " 1884	...	...	\$290 }	77 per cent.
Profit per yard at 10 per cent. } 1830	...	2·40 cents. }	Decrease,	
on capital ... 1884	...	·41 cents. }	·83 per cent.	

Another case is that of paper, in which, spite of prodigious demands, there has been a steady fall of price by reason of the discovery of new materials and machinery, and the competition of makers on the Continent.

Paper is now produced from woody fibre, straw, and grasses, as well as from rags, so that the cost of books has

fallen almost beyond belief, to say nothing of newspapers and periodicals. When a well-printed standard book can be sold for threepence, the reduction of price may seem almost to have reached its limit. The following table gives an idea of the changes in the cost of paper :—*

Year.		Fine Paper.		Second Quality.
1849	...	9½d. to 10d. per lb.	...	8d.
1854 to '61	...	8½d. to 9d.	...	7½d.
1862	...	7½d.	...	6d.
				(Duty 1½d. per lb. taken off in 1861.)
1885	...	5d.	...	4d. to 4½d.
		(Common, 3d.)		

Another curious illustration has recently come into notice in consequence of the riots in Belgium. Great distress exists among the glass-blowers of Charleroi—a state of things which is due, according to a recent correspondent of the *Times*, to the fact that “The improvements in the methods of manufacture have entirely upset the equilibrium between the supply and the demand.” It appears from his statement that one Siemens “tank furnace,” as used by M. Baudoux, does the work of eight “coal furnaces,” and requires but four men to feed it instead of twenty-eight. Another is equal to six coal furnaces. A coal furnace

* It is stated on the best authority that a paper mill making £15,000 a year fifteen years ago, will hardly pay its expenses at this moment; and that a mill worth £50,000 to sell at that time, would barely fetch £8,000 now.

No one would venture to attribute such a change to any alteration in the supply of gold. But competition has affected makers of paper as well as producers of corn.

Compare the following, from an American paper, *Bradstreet's*, of 22nd May last :—“Holyoke, 19th May: The manufacturers of this ‘paper city’ have found no relief for two evils of which they complained bitterly at the time of the Saratoga Convention last summer. One is the continued prevalence of extremely low prices. . . . With regard to prices, it is to be said that a year ago experienced manufacturers called the ruling quotations the lowest ever known. Nevertheless, there has been a steady decline since that time.”

Some of our paper makers complain much of foreign competition. But their brethren in Protectionist America seem to be in much the same condition as to prices. The same paper says that prices have fallen 10 per cent. in a year.

produces 115,000 feet of glass per month, and a tank furnace 1,000,000 feet per month. The coal furnace only works eighteen days in a month, and the other sort "can be used without interruption," and can be worked with fuel of a "very inferior quality." We have here an instance of a truly wonderful economy, and it is hardly surprising that such results should have alarmed both small producers and their workmen. The effect on prices has also been extraordinary.

There is no fall in the highest kind of glass, where much skilled labour is necessary for the manufacture, but common window glass has fallen at least 50 per cent. in consequence, as it would seem, of these discoveries.

(3) Perhaps no consideration is so important, in discussing recent prices, as the reduction in the cost of distribution, both by land and water, since 1850.

We have in Europe eight times as many miles of railway as we had in 1850, and in the world quite eleven times as many. It is not easy to say how far the cost of carriage is reduced by the existence of railways, but it has been estimated as amounting to a saving of five-sixths. The extension of the area of production is more important even than the mere saving of cost of carriage: that is to say, by the reduction of the cost of carriage great sources of supply are opened up which in other days could not have exported any surplus. For instance, not many years since, Indian corn was burnt for fuel in the far Western States of America, and it is certain that the wheat of the "great North-West" and of India could not have reached our English markets but for low rates of carriage by land and sea. Of course the extension of the home trade in every country by railway carriage has been enormous. Opportunity of travelling makes men desire to travel, and facility of transport must cause a great development of business.

But, as regards price, it is probable that competition amongst foreign producers has an even greater influence than the mere reduction of the cost of carriage within our own limits. Articles which we do not produce at home, like sugar, have fallen as heavily as our own staple productions, the railroad and the steamer operating all the world over to create competition and reduce charges. As Professor Cairnes said:—

"Foreign trade not merely supplies us with commodities more cheaply than we could produce them from our own resources, but supplies us with many commodities which, without it, we could not obtain at all." (See Appendix N.)

No better illustration of this point can be given than the change in the cost of carriage from Chicago to New York. What cost 42·6 cents to carry from Chicago to New York in 1868 was carried in 1884 for 13 cents, or just a third of the old charge.

One is not, therefore, surprised to find that three American railroads which carried 10,000,000 tons in 1868, carried 46,000,000 tons in 1883. Charging so little, they must carry more, or work without a profit (Nimmo, "Railway Federation," &c., January, 1885). The following figures as to the Pennsylvania Railway Company add another good illustration. The tonnage moved one mile in 1865 was 420,060,260 tons, but in 1885 it was 3,318,466,263 tons. The increase of 1885 even over 1884 was 235,966,277 tons. The average charge per ton per mile was about $\frac{5}{6}$ ths of a cent, or say $\frac{8}{11}$ ths of a penny, and only $\frac{1}{4}$ th of the charge made in 1865. An additional charge of $\frac{1}{10}$ th of a cent per ton per mile would have added about £600,000 to the revenue of the company. The competition must be pretty keen which compels a company to forego such an addition.

Speaking of the whole United States, Mr. E. Atkinson says ("Distribution of Products," p. 274) that in 1865 they had one mile of railway to 1,000 people, and in 1885 they had one mile to 450 people. It appears from the same high authority that in 1870 there were moved on all the railways in New York State 20,000,000 tons; but in 1883, 74,000,000 tons. Had the rate of carriage of 1870 been charged in 1883, the total paid would have been about £31,600,000, whereas the actual charge was £16,700,000, showing a saving of £14,900,000.

Taking the railways of Ohio in a similar way, there were moved in 1869 about 14,000,000 tons, and in 1863 63,700,000 tons, and the saving to the public from the reduction of rates was about £18,000,000—even greater than in the case of New York.

In the case of the New York Central Railway, it has

been recently worked for a profit of less than $\frac{1}{2}$ of a cent (say $\frac{1}{8}$ th of a penny) per ton per mile, and the average freight in Ohio has come down to one cent (say $\frac{1}{2}$ d.) per ton per mile.

Again (*ibid.*, p. 85): "The saving in the cost of moving merchandise over existing railroads, comparing one year with the next preceding, that is, over the railroads existing in each year, has far more than equalled the cost of building all the new railroads constructed in the subsequent year for 15 years—from 1865 to 1880. In other words, the reduction in the charge on existing railroads each year, computed on the quantity of merchandise moved in that year, has amounted to a sum equal to the sum expended in the extension of railroads in the next year, for each and every year since 1865."

Mr. Atkinson (*ibid.*, p. 235) makes one general remark of great interest. He says, "Had the actual quantity of merchandise moved by the railroad in 1880 been subjected to the average rate per ton per mile which was charged from 1866 to 1869, the difference would have amounted to, at least, £100,000,000, and perhaps £160,000,000 more than the actual charge of 1880, and yet, up to this period (July, 1884), the prices of leading farm products had not been substantially affected by this enormous change."*

Prices of grain, &c. have fallen much in America since Mr. Atkinson wrote, nearly two years ago, and far more than he seemed then to expect; but no one can wonder at such effects from the facts he mentions, and from the competition of India, which has recently become so important, and the importance of which as a competitor depends largely on the fall of sea freights and the development of railways in India.

So, all over the world, the effects of lessened cost of distribution become more and more conspicuous.†

* In a recent letter to *Bradstreet's*, of 15th May last, Mr. Atkinson gives another comparison. He compares 1865 and 1885, and shows that, taking a given weight of goods to be moved from Chicago to New York by the New York Central Railway, 58 per cent. of the value was absorbed in transportation and depreciation of currency in 1865. But in 1885, only 20 per cent. was absorbed, the charge per ton per mile having fallen from 3·45 cents to $\frac{9}{105}$ ths of a cent.

† Mr. Atkinson (*ibid.*, p. 183) makes an observation which tends

The triumph of invention has been arrived at in the wheat trade of America, for we are assured by Mr. Atkinson (*ibid.*, 76) that "seven men suffice to give 1,000 persons all the bread they customarily consume in a year.

"If to these we add three for the work of providing fuel and other materials to the railroad and to the baker, our final result is that ten men working one year serve bread to one thousand (1,000)."

It may, perhaps, be fairly questioned whether the fall in the cost of carriage by sea may not have had even more influence on prices than the fall in land-carriage. Certainly in nothing has the influence of invention been more rapid and more important.

Partly in consequence of cheapness of materials, and partly in consequence of the limitation of liability, the building of steamers has made an almost absurd progress in recent years. In 1883 alone more than £3,500,000 was paid up by shareholders in "limited" shipping companies; and this fact prepares one for the extraordinary figures given by Mr. S. Williamson, M.P., in the *Fortnightly Review* for January, 1885. (Cf. Appendix G.)

He says that the combined capacity of our sailing and steam ships was in 1875, 9,975,000 tons, and in 1883, 14,646,000 tons—an increase altogether "wild and unjustifiable," adds this excellent authority. And, of course, the carrying capacity of each steamer has been enormously increased in recent years by inventions which reduce the quantity of coal to each ton of cargo, and thus leave more

strongly to confirm the general argument of this paper. "May it not be that the complete revolution in the methods of commerce, which has been brought about during the last twenty years by the railway, the steamship, and the telegraph, as well as by the application of science and machinery to agriculture, has now come to what might be called a culminating point, after which the benefits heretofore enjoyed mainly by the producers and distributors of the staple products necessary to life are now in process of wide distribution amongst all consumers? In other words, may it not be that, under the beneficent law of diminishing profits and increasing wages, a lower plane of prices on a gold basis has been reached, which is of a permanent character?" Taking all grain together, Mr. Atkinson reckons that the product per head of the population of the States has increased from $32\frac{1}{2}$ bushels in 1865, to $52\frac{1}{2}$ bushels in 1885, the population having increased during the same period about 25,000,000.

room for cargo. A few years ago it required eighteen tons of coal per day to move a steamer of 1,200 tons burden. Now ten tons per day will move a steamer of 2,600 tons. The current expenses of the larger ship are not increased at all in proportion to her size, and thus arises economy, not merely in the amount conveyed by a given amount of fuel, but also in other expenses.

It follows that shipowners can afford, with a reasonable profit, to carry goods at rates of freight which would have been ruinous in years gone by, and they are forced to reduce freights even lower than they can afford by most unusual competition.*

The rapid increase in the use of steamers is well shown by the following figures as to one part of the world:—

Registered net tonnage sailed from the United Kingdom to India, China, and other Eastern ports, and the Australian Colonies.

During the year	Sailing Ships.		Steamers.	
	Net Tons.		Net Tons.	
1874	1,626,792	...	654,498	
1875	1,640,858	...	710,560	
1876	1,640,704	...	723,039	
1877	1,772,298	...	862,919	
1878	1,484,368	...	751,595	
1879	1,462,073	...	808,208	
1880	1,646,559	...	1,125,991	
1881	1,577,774	...	1,606,841	
1882	1,493,955	...	1,587,400	
1883	1,333,046	...	2,072,427	
1884	1,325,151	...	2,145,635	
1885	1,448,961	...	2,274,767	

* The history of inventions relating to steam traffic may be summed up as follows:—

1855.—Introduction of screw instead of paddle, and general use of steamers.

1866.—Introduction of condenser and “compound engine,” and consumption of coal reduced from about 7 lb. per indicated horse-power to 3 lb. per horse-power.

1870.—Horizontal action superseded by “inverted direct action.” This, together with “the triple expansion,” will probably reduce consumption to 1.50 lb. per horse-power.

Boilers and furnaces have been greatly improved, and finally the “forced blast,” effected by a fan fixed below the furnace, will, it is expected, enable steamers to burn cheaper coal and will keep up a regular heat.

Further economy is expected in high quarters from the use of petroleum as a source of heat for steam-ships.

The result is seen in the following table of recent freights (see further Appendix O) :—

COMPARISON OF FREIGHTS IN OCTOBER (INDIA).

Calcutta to U. K.	Article.	1881. s. d.	1882. s. d.	1883. s. d.	1884. s. d.	1885. s. d.
<i>Via</i> Cape	Jute	65 0	45 0	37 6	30 0	33 0
„	Canal	85 0	37 6	35 0	31 3	33 0
„	Cape	Wheat	62 6	30 0	25 0	20 0
„	Canal	„	71 3	35 0	26 3	17 6
„	Cape	Linseed	67 6	45 0	37 6	30 0
„	Canal	„	—	37 6	35 0	30 0
„	Cape	Rapeseed	70 0	47 6	37 6	30 0
„	Canal	„	35 0	40 0	37 6	32 6
						35 0

OUTWARD FREIGHTS FROM WALES.

Year.	Alexandria. s. d.	Bombay. s. d.	Genoa. s. d.	New York. s. d.
1875	16 0	29 0	13 0	35 0
1880	15 0	24 0	14 0	10 0
1883	12 6	18 0	11 0	11 0
1885	10 0	19 0	10 0	9 0

HOMEWARD FREIGHTS.

	Bombay s. d.	Brazils. s. d.	Quebec (Timber). s. d.	Odessa. s. d.	N. York (Iron). s. d.
1875	41 0	43 0	80 0	30 0	7 0
1880	32 0	40 0	65 0	23 0	5 6
1883	28 0	48 0	—	23 0	5 0
1885	23 0	37 0	50 0	20 0	4 0

Freights for wheat from San Francisco to England fell 50 per cent. between October, 1883 and October, 1884.

Another indirect economy arises from the reduction of the time occupied in voyages ; so that in the Eastern trade, for instance, the stock of goods now on the water in course of transit is only about one-half of what used to be thus locked up. In other trades the economy of time will not be so great, but it will still be very large. It is an economy which is felt both as to imports and exports. It amounts to an enormous saving of capital, which is thus quickly realised, whereas formerly it would have remained for a long time absolutely unproductive, and, in fact, requiring much outlay for carriage and custody during transit. It would be

extremely difficult to make any calculation of the amount of interest of money thus saved every year, but on such a national turn-over as ours the amount must be very important; and though the advantage thus obtained would accrue equally to shippers of all nations on a given amount of goods, England must of course get the greatest share of the saving, as she so far exceeds any other nation in the amounts dealt with.

Perhaps few modern inventions have had more peculiar or important effects than the telegraph. In its ruder forms it did not seem likely to produce such remarkable results; but, as now developed, it is admitted that the course of commerce has been greatly modified by its influence.

Generally speaking, it may be asserted that it is no longer needful to retain large stocks of goods at any of the great centres. The price of articles in London is known every day all over the world, and transactions can be arranged with as much certainty and facility between London and Bombay or Hong-Kong as between London and Liverpool. The merchant can order purchases or make his sales by wire just as readily as by letter, and he need not wait months for a reply. Everything is fixed in a few hours, and payment can be arranged by the same medium. Where formerly bills were drawn and transmitted in settlement of accounts, and much time was lost in the transmission of cash, the remittance can now be made by telegram, and the rate of exchange is settled in the same way.

Thus a great saving in the use of capital is effected. The goods purchased must, of course, be shipped, but they are only now a fraction of the old time on the way, and, on arrival, payment can be effected, if desired, in a few hours instead of weeks. The period occupied by the voyage being thus curtailed, and the supplies ordered as if by word of mouth, and paid for as if buyer and seller lived next door to one another, it is obvious that the use of capital in the movement of goods from one country to another is reduced to the smallest possible amount.*

* It is, however, to be observed that very large payments are still made by drafts both on foreign countries and on England, and in some trades transmission of money by wire is less common than it was a few years ago, and the system of drawing at short dates has become more

Formerly such a trade needed the co-operation of rich men on both sides of the world, and of a series of middlemen. Now small men can do the work for small profits on each transaction, and the multiplication of transactions will give a good result, though the commission be greatly reduced. Moreover, the need for middlemen and their charges has almost ceased to exist. As a matter of sentiment, such changes may not be agreeable, but in matters of business sentiment must yield to common sense ; and it is obvious that such great economies are certain to hold their ground, and that those who decline to accept facts must submit to be crushed by them.

It is not easy to estimate the full effect of such changes as to the capital employed in trade, but some years ago it was stated by one eminent firm in the East that their business could be conducted with one-fifth of the capital formerly required. If this statement be not exaggerated, it is evident that vast sums of money formerly invested in foreign trade must have been brought home, or turned into other modes of investment abroad. In other words, there has been a great saving of capital embarked in trade, the result being that a greater business can be done with far less absorption of money, *i.e.* of capital in the form in which it is available for use in trading adventures. The exchanges of the world are effected more economically, not merely by saving in the cost of carriage by sea or land, but also by saving in the interest of the money necessary for the conduct of such transactions.*

prevalent. However this may be, it does not materially affect the argument used in the text. The influence of the telegraph on trade becomes every year more and more important.

* In considering the causes which have encouraged an extraordinary production and importation of many articles, we ought not to omit all reference to our new law as to limitation of the liability of partners. A great amount of money has been diverted from ordinary and safe investments to trading enterprise by this change of the law. It operates on production both directly and indirectly. The development of iron and coal companies affords an illustration of the direct results of the law, and the extension of shipping companies of its indirect influence. By the former, great masses of iron and coal have been brought into the market, which must otherwise have waited long before their extraction from the earth ; and by the latter, the cost of the carriage of every conceivable material which we can import has been reduced to

The causes thus set forth seem quite sufficient to account for a fall in prices even greater and more general than that which we have seen. But it has been objected that the activity and ingenuity of man were in full swing before 1873, and that production had then rapidly increased, with an increase in many prices. This is true, but it is forgotten in this argument that, though peace was restored, its effects had not then been fully developed, and competition was, therefore, still much hindered ; and it is also forgotten that the great reduction of railway rates in America, and in shipping charges all the world over, to say nothing of the complete development of telegraphic intercourse, has arisen since 1873. Much had then been done, and we were then on the eve of far greater changes, the full influence of which we now feel. As remarked above, the extraordinary fall in several important cases did not occur till 1884, and, curiously enough, the same peculiarity is observed in Indian prices, although they have been more stable than ours.* Changes in price may linger, but they are sure to come sooner or later, when the efficient causes are at work.

But there are many who are impatient. They admit that goods have overtaken money, and they demand an increase of money in order to maintain money values. Their desire for bimetallic money is really based on the conviction that such a change would restore prices to a higher level than that to which we have been recently accustomed. If, however, we look back to 1850, we find that the

an almost incredible extent. Materials once put on the market cannot wait long for sale. If one price will not sell them, a lower price must be taken ; and ships, rather than remain idle, must work at rates which would, a few years ago, have been thought ruinous. It would not be fitting here to discuss the question whether limitation of liability works well or ill ; but it is important to remember that it increases competition prodigiously, and is, therefore, one important cause of the recent fall in prices in our own country. Another cause of great importance is the extension of emigration, which must have greatly increased production, especially in America and Australasia. Some figures on this head will be found in the Appendix (H).

* See Mr. Barbour, " Theory of Bimetallism," p. 93. After stating that the demonetisation of silver had checked the fall of prices in India, he says :—" Even in silver prices the fall has been very great in 1884 and 1885."

world's stock of gold and silver has just about doubled, and the total coin in use is said to have increased from 460 millions to 1,250 millions; but prices have returned to the level of 1845-51, and even to a lower level, spite of this enormous increase of coined money and the great development of credit. This being so, it seems dangerous to reckon on any powerful influence on prices as likely to result from an extended use of silver as legal tender money. Gold money has increased twice as much as silver money since 1850, according to some, and three times according to others. But prices have gone back, even where gold is the unit of value; and even where silver is the unit, as in India, prices in silver have not advanced, though the supplies of silver have been great.

It is sometimes suggested that the proposed change is needed, not so much to restore prices as to prevent a further fall. If, however, it be true that prices are affected far more by other facts than by the amount of metallic money in use for the time being, it is evident that we cannot depend on an increase of that money even for a check to a pending fall of price. Who can believe, for instance, that any change in our money would have prevented a heavy fall in the value of grain since 1868, or the fall in metals in the same period? Without asserting that the use of silver as well as gold as money would have no effect under any circumstances, it is certain that, if the argument here used be correct, we cannot depend on such a change in order to check a further fall in prices, and, therefore, that we should derive in this way no certain compensation which could be set against any confusion or other evil consequences which might result from a change in our monetary system.

In answer to any argument from history, it is alleged that we have suffered from want of co operation amongst nations, and that recent confusions would have been avoided if we had agreed with other countries as to the relative value of gold and silver for purposes of money.

It is very easy to say that we could define by law what weight of silver should be equivalent to the weight of gold in the standard pound, and that we could depend on this weight of silver having the same purchasing power as the

defined equivalent in gold, provided the silver were, by agreement of all the great nations, coined for all comers on the same basis as that adopted by us. No one, it is said, would take less than the coin-value for his silver, because he could at any moment get it coined on the agreed basis at several great mints. Such an agreement would, of course, work easily enough under ordinary circumstances and during peace, but there seem to be serious difficulties.

(1) Supposing the supply of silver should increase rapidly, and that of gold should fall off, the result would clearly be that silver would remain here, and gold would be exported, being more valuable as merchandise than as coin. Thus we should probably end in monometallism on a silver basis—a result not apparently approved by any one.*

* It will be interesting to refer to two recent authorities, who agree in thinking that even if gold and silver had been used as now proposed during recent years, the result would have been, before this, that silver would have been practically our sole money, and that prices would have fallen just as much as they have already done, to say nothing of possible dangers from the abandonment of the use of gold as money. Mr. Giffen is a writer who attributes much of the fall of prices to scarcity of gold, but he does not advise us to use silver as a supplement. He says ("Journal of Bankers' Institute," vol. vii. p. 464):—"It is clear that if the production of silver had been increased, the production of gold might have been diminished, and prices, even if they had come to be reckoned in silver—as I believe would have been the case—would, perhaps, have fallen about as much as they have done." So also Professor Marshall (*ibid.*, p. 449), after referring to the possible greater richness of the mines of silver—"We think that gold will practically go out. Gold is now mined, in spite of difficulties, because it is so valuable; but if gold were fixed at 15½ or even 18 times the value of silver, and if the gold mines were scanty, and the silver mines were rich, gold would almost cease to be mined, and the result would be practically a silver monometallic currency." Mr. Giffen again said (*ibid.*, p. 459):—"I believe the effect of the introduction of what is called universal bimetallism at the present moment would be that every great country practically would, in a very few years, have silver for its standard money. Gold everywhere would become merchandise at a varying premium in relation to silver." This seems a most natural conclusion, having regard to recent evidence as to the production of silver. American authorities expect a further great fall in silver, because they hold that even the present value, in relation to gold, is not in any way justified by the cost of mining. Mr. J. H. Norman, who has paid much attention to this question of the relative

The same result would ensue supposing some large holders of silver—say in the East—should prefer to hold gold as a more stable commodity, and should effect the exchange even at a slight loss in order to avoid another silver panic. Should this happen, and our law as to issue of notes remain unchanged, with free coinage of both metals, a great part of our gold might be exchanged for silver without any conceivable advantage to any one. That mere exchange would not add to our total of “money,” as we should part with the same value in bullion as we received, and it would not, therefore, affect prices directly; but it is hard to see what good could arise to the country from a financial alteration which might make it very difficult to pay any debts except in silver, and might in substance make us once more monometallic, only in the wrong sense of the word.

(2) Supposing the supply of silver to fall off, such a plan would have no effect in preventing a scarcity. Free coinage does not meet the case of an insufficient supply. In that case, silver would buy more than gold and would be exported, while gold, as overvalued, would remain at home. So we should return to a monometallism on a gold basis, after more or less confusion. In our own days we have seen remarkable changes, even before 1873 and the fall in silver. Thus, we have had gold scarce in France, and we have seen silver scarce there, just because France had free coinage of both metals; and at one time gold was dear and scarce, and it paid to coin silver, which was cheap, and at another time gold became cheap and it paid to coin gold. All this time the franc was the unit of value. So now in America you have a gold unit of value, and both metals used, with much consequent confusion and hesitation—a forced coinage preferred to a free coinage, and money

cost of producing gold and silver, makes the following alarming statement:—“Mr. Pixley evidenced in 1876 that silver was being produced in Mexico at 18d. per 480 grains, or at the relation of 53 parts of silver to 1 part of gold. My investigations, made in this year and in 1885, into American figures showed a much greater proportion of silver; but, accepting American statements, I make the average relation of 63 parts of silver to 1 part of gold for the year 1883.”—*Appendix to Third Report of Commission on Depression.*

created for which there is no demand, in order to support one of the smallest commercial interests in the country.*

(3) Even supposing both metals remained in use, it is well pointed out by Mr. Giffen ("Essays," second series, p. 32) that the same difficulty would still exist which is alleged to exist at present in reference to maintaining a due supply of money for an increased population and for increased trade in an increased production. He puts it as follows:—

"The permanent causes of the scarcity of money in relation to commodities remain, and the momentary abundance must be succeeded quickly by the same relative scarcity as before. The case against bimetallists on this score is very strong. Gold and silver being equalised, assuming the bimetallic scheme to be successful, the future course of prices will be regulated by the aggregate annual production, not of the one metal but of the two. The proportion of that annual production to the stocks of the two in use is, however, much the same as the proportion of the production of the one metal to the stock of that metal only. The future course of prices will accordingly be much the same as if one metal only were used in a particular country."

(4) Another difficulty seems to arise as to the proportion which should be agreed upon. At present the actual value of silver (July, 1886) is less than 20 to 1, whereas the old ratio, and one so much recommended, is $15\frac{1}{2}$ to 1. If England, Germany, France, and America should determine to give at the rate of $15\frac{1}{2}$ to 1, there would be much danger of a great influx of silver from the East, and an enormous

* The value of the silver interest is not equal to that of the "hen industry" in the States, but Congress favours the silver owners. (Appendix E.) The curious and instructive fact is that nothing probably at this moment so tends to depress the silver market in Europe as the existence of the American Bland Bill. People ask, what will America do with the unused dollars should she repeal the Bill, and, if she should force them on the market, what would the effect be? Nothing could better illustrate the danger of the interference of legislation with the natural course of business and values. The very law which was passed to maintain the price of silver is now depressing it. See Secretary Manning in *loc. cit.*, p. 6: "Forced silver circulation, forced silver accumulation, these are the alternatives to which silver coinage has brought us now. But the term when a choice will remain possible between these bad alternatives, silver storage or a silver basis, is narrowing."

rise would at once take place in many securities now depressed, to the loss of some and gain of others, but for no good reason. If, on the other hand, 20 to 1 were chosen, the loss incurred by the Indian Government would be made permanent, and the rupee fixed, at present, at 1s. 5d. or 1s. 6d. There is much to be said for and against either figure, and it seems very difficult for any Government to make a choice. There is no virtue in a value which has fluctuated so much within a short space of time, and much loss must arise to individuals whichever course is taken. It is, however, argued that such losses are only temporary, and would be of little or no consequence, if the ultimate result should be a stable equilibrium as between the two metals.

To ourselves, as traders, there exists really no motive for keeping up the price of silver more than of copper or iron. In fact, commercially, silver is of infinitely less consequence than iron to the English nation, except so far as our commerce is affected by exchanges with countries like India, where silver is the legal tender. India, it will be seen, as a producer, needs no care on our part, and we may safely leave other countries to manage their own affairs, it being to be observed that, as in the cases of Russia and the Argentine Republic, we constantly do a great business with countries where the exchanges are fluctuating.*

If, then, we can look for neither the permanent restoration nor maintenance of prices from the use of silver as money in addition to gold, it is not easy to see what we should gain from the change.

One disadvantage, however, which might arise is easily seen. If debtors could pay in gold or silver at their option, it is plain that there must be an ambiguity as to the real

* See Mr. Goschen, in House of Commons, 12th of June, 1879:—
 “We have passed through a period which has been viewed by all merchants trading with India with regret and alarm. And I do not wish to minimise these causes for regret, if, on the other hand, I call attention to the fact that this country has continually done a prosperous business with countries subjected to no less violent fluctuations in their exchanges. Look at the trade with the United States when gold was at an immense, but ever-varying, premium. Look at the Russian exchanges, utterly without stability; at the Austrian exchanges. Yet England has not failed to do good business with such countries, nevertheless.”

value of a pound which does not now exist. Now, everyone, all the world over, knows that "a pound" sterling means so much weight of gold. A man who draws on London knows just what he will receive when his draft is paid. But he will not know that with certainty should a new law declare both metals to be legal tender. How far such an uncertainty would injure our position as the great banking centre of the world it may not be easy to estimate. It seems obvious that such a change in the nature of the pound could not do us any good from a mercantile point of view, but it is equally clear that it might be very injurious.

Another serious consideration arises when we contemplate the possible effect in the East, and especially in India, of any attempt to fix a price for silver in Europe by agreement. It appears quite clear that large stores of gold are held in India, although gold is not legal tender, and no gold coins are current as money. Gold coins are, however, not only received but preferred in payments, and it is said that they are so popular that as much as 20 to 1 has been allowed for gold when received instead of silver (Clarmont Daniell, "Discarded Silver," p. 13).

A well-known Sultan is said to have £2,000,000 in gold ingots in his Treasury, and it is known that very large sums in gold coin and bullion are held in India. Why the Indian people should prefer to hold in reserve a metal which cannot be coined in India is a question not easy to answer; but if it be true that "there is nothing which from its nature is purchasable with gold in India, from personal services or railway tickets to bales of cotton, for which the seller would not prefer to be paid in gold uncurrent coins . . . than in silver money" (C. Daniell, *ib.*, p. 12) the mystery becomes less inexplicable.

In our own country in the days of Newton silver coins were legal tender, but gold was the favourite metal in use and gradually superseded silver in all the larger transactions of life. We cannot, therefore, be surprised that gold should be preferred amongst the richer classes of our great dependency. But if this be so, and if the tendency to the use of gold in the East is an increasing tendency, it may well be that if we chose to give silver an artificial value by agreement with other great nations, only the result might be

that Eastern holders of silver would remit it to Europe to be coined and then exchanged for gold on the new scale of values, an operation which would bring a large profit, supposing silver to be depreciated as against gold in the East.

How far such an operation would go it would not be easy to say. A large export of gold might soon correct the values, but the operation might cause great tension and alarm here. Mr. Daniell asserts, writing in India, that "in Asia gold is less variable in value than silver, is more sought after, and always more acceptable in payment of a debt than silver; and as silver is much more easily procured than gold, it is the owner of gold that will refuse to sell it at any other than its natural price, and if that price is 1·19, he will not part with his gold at 1·15½." No, but he may send his silver to Europe at that rate in order to procure gold for which he could procure 19 to 1 of silver in India. Should this be so the nations who had made the agreement might, in fear of the East, do that which the Latin Union did in fear of Germany, and suddenly stop the free coinage of silver, with what consequences to silver and gold it is not easy fully to predict. We ought certainly to be cautious how we enter on any attempt to re-arrange the values of the precious metals without taking into account those vast stores in the East, which are no longer distant and unattainable, but are almost as much at our doors as the silver of France or Germany.

The present situation in India is very peculiar and very interesting. Although we hear so much of depreciated silver in Europe, it is the fact that silver prices have fallen generally in India, though not so much as gold prices have fallen here. The great increase of Government drafts on India has, of course, lessened the export of silver to the East, so that the full effect of the returns in silver for exports, which might otherwise have been made, has not been felt. The shipments of silver to India were in fact much larger in the '50's and '60's than in the '70's. (See Appendix I.) There has not been any great surplus of silver in India, and prices have, from many causes, tended downwards, and this fall in Indian prices has encouraged imports, while the low exchange in Europe has, of course, stimulated

Indian exports, so that we see an increased trade in both directions.

The figures are very remarkable :—

Years.	Exports from India.	Imports into India.	Net Exports.
1870-75 ...	285,000,000	161,000,000	124,000,000
1875-80 ...	312,000,000	188,000,000	124,000,000
1880-85 ...	411,000,000	253,000,000	158,000,000

Thus the five years 1880-85 show, as compared with the years 1870-75, an increase in exports from India of nearly 45 per cent., and of imports into India of more than 50 per cent. It comes to this, that trade is extremely active in both directions, and the natives of India, who are producers and sellers, profit by the low price of silver in Europe, which assists them in securing a good market, and at the same time as consumers and buyers in India they are getting what they require at low silver prices.*

For instance, cotton goods are selling in India at more than 30 per cent. less than the prices of 1870, and it appears that all staple articles produced in India are lower than they were in 1870. (See Appendices L. and M.)

Whether this state of things would continue, supposing

* Mr. Barbour, in his recent work on "Bimetallism" (p. 134) attempts to show that the great increase in Indian exports is not due to the fall in silver, because silver prices of the exports have not increased. But this is a very incomplete view of the case. The profit to the trader arises from the fact that he gets a price in England, in gold, which will now purchase a much larger amount of silver than in former times, and this silver when remitted to India will purchase per rupee as much as ever of other commodities, prices in silver having fallen pretty generally in India. The extra rupees received in this way, therefore, afford a prospect of an extra profit which must encourage exports, as these, but for this advantage, might be unprofitable.

Mr. Barbour is a stern bimetallist, but he is compelled to admit that the fall in silver has not injured India, because he thinks the demonetisation of silver has prevented a fall of prices there. The Government has lost, but the people have gained. One may not agree with Mr. Barbour's explanations, but one is glad to agree in his conclusions as to the condition of India.

See p. 150, where he says that the fall in exchange cannot have ruined Indian finance, as the Government had in 1882 a surplus of 450 lakhs and has imposed no taxes since that date, though the further fall has thrown an additional burden of nearly 200 lakhs a year.

some great change in the silver market were suddenly made by the English Government, may well be doubted, and certainly needs consideration.

A great advance in the exchange here would discourage exports from India, and should prices rise here for goods which we export, as is hoped by bimetallists, exports to India must be discouraged. In what way this state of things would suit our manufacturers and those whom they employ it is not easy to see.

The general result of this long argument seems to be that it is by no means clear that, even if we assume low prices to be injurious to us as a trading nation (a very strong assumption), we could correct the modern tendency to low prices by any change of our currency in the direction of bimetallism or a double standard. Such a change must make the value of the pound less certain than it now is, and might, therefore, be injurious to us as traders, and this the more as recent events throw more doubt than ever on the real value of silver. At the same time the experience of 1848 to 1860 ought to make us very cautious of depending on any existing facts as to supplies of gold, as these may again suddenly rise as they did in former years.

Even an agreement cannot be depended on in the present condition of affairs, especially when we take into account the difficulty of fixing on a ratio of value as between gold and silver, and the great uncertainty which exists as to the course of events in the East where so large stores of silver are known to exist.

The events of recent years seem to point out the great danger of sudden changes effected by ignorant Governments, and to indicate the necessity of the utmost caution in dealing with a subject-matter which affects all classes of the people, and especially those least able to protect themselves, and to whom, so far, these changes of value have brought far more good than harm.

Wages have not fallen as yet at all in proportion to the fall in the prices of necessaries ; nor should they do so, for when necessaries were very dear, wages were very low ; and it seems strange that we should desire to raise the prices of the articles which are most used by the humblest of our people. Probably it will be said that the object of bimetallists is

not so much an advance in prices as stability of price; but it is pretty clear that, but for the hope of securing some advance, so much zeal would not be expended in this cause.

Our trade is still enormous, and it is far from clear that we can enlarge it or improve its stability by any changes which would imply a want of confidence in our monetary system, and would create an impression that we have failed where, in fact, we have had great success, largely because we have maintained a high credit, and have adhered to a money which is as stable in its value as any money has ever been in the history of the world.

Let those use silver whom it suits, and who prefer it. It is certain to be used by great nations who have long adhered to it. Our forefathers chose gold for general use, even while silver was the legal tender, and the unit of value was a given weight of silver. It seems strange that we should be asked to adopt silver, as if gold had proved a failure as a standard, and far more uncertain in value than silver, at the very moment when silver in Europe has fallen 17d. an ounce from the old par, or about 28 per cent., and when we are threatened by an extended production on a scale never yet approached. No one proposes to demonetise silver. No one suggests that recent proceedings in that direction were wise, but many object to an attempt to give an artificial value to a metal which would not suit us as money, and which may yet have to bear in the future even greater fluctuations than in the past.

If that attempt is to be made, it ought to be made by those who produce silver, or who have great stores of silver coin or bullion, the value of which they desire to maintain. France, Germany, and America are powerful nations, and each of them is much interested in silver. It seems strange that if a wide-reaching agreement would suffice to maintain the value of silver, they should fear to make a beginning in this direction. This want of courage is discouraging to those who have no direct interest in silver, and the fact that those most interested show so much fear, arouses suspicions and doubts which will not be readily removed.*

* It has been suggested that India might join in any such agreement without affecting our own system of currency, and her adhesion would be

of the greatest importance. But this could not be effected unless gold were freely coined and made legal tender on a certain ratio of value with silver. In other words, we must give India a currency partly gold and partly silver, and a new unit of value consisting of a certain weight of either metal.

We might coin gold in India without making gold a legal tender there. We might have Indian sovereigns and half-sovereigns, exactly like our own in weight and appearance, with the exception of some mark to indicate their origin. Such coins, even though not legal tender, would probably come into use largely, and it is believed that great amounts of gold bullion would be brought out to be coined, and, once coined, much of this gold would get into circulation. India has received about £100,000,000 gold from Europe since 1856, and how much more she may have no one knows. As mentioned before, it is said that Indians like gold, and Indian sovereigns would become a favourite medium of exchange, even though not legal tender. They would be freely taken, and would be preferred to silver coins, just as gold was preferred in England a century ago.

Supposing gold to be coined and made legal tender in India, you may make it the only legal tender, as we do here, or you may combine it with silver. Some high authorities propose to take from silver its power as money, except for token coins, so as to resort to a gold circulation only in India. This would be a most dangerous innovation—a revolution in fact, and one not justified by anything in the present situation. It would enormously detract from the value of existing stocks of silver, by destroying one great market, and forcing great masses of useless coins on the market, and it would at the same time create a new demand for gold, which is, we are told, already scarce and dear. Probably such a change would cause such serious loss and inconvenience to the masses of India as to arouse political disturbance of the gravest character.

Perhaps such a proposal need hardly be seriously considered, but to give currency to both metals, and to make both money on a ratio of comparative value, fixed by law, is a very different plan. However plausible it may seem, it appears to have difficulties. In the first place we must fix a ratio—not an easy matter, as already explained. Whatever is decided, the ratio chosen must be the ratio to be adopted in any agreement with other countries, and could hardly, therefore, be arrived at without consultation, if India is to unite with other silver-using nations as to an agreed valuation between gold and silver.

Another serious question arises when we consider the probable effect of the restoration of the value of the rupee on the trade of India. As explained before, it would seem that raising the value of the rupee would discourage Indian exports and imports, and thus, for the present at any rate, injure both India and England.

Again, should the adoption of gold coins as legal tender cause a great and sudden increase in the money circulating in India, the consequence might be an advance of prices all along the line. Exports would be discouraged, and probably an advance in the prices of articles imported from Europe for the use of the people would check consumption, and thus our trade would be lessened by the reduction of the

purchasing power of the people through diminution of exports, and also by the discouragement offered to the purchase of English goods. To such people as the Indian masses, cheapness is vital. An advance in the value of the produce they have to sell would assist them, but it does not follow that they would pay prices higher than those to which they are accustomed for goods imported for their use. Even an advance in goods exported would not help them permanently, if the result should be that an article such as wheat, for instance, lost its European market, until an excess of supply should again reduce its price.

Prices have been fairly steady in India during our recent disturbances, and if fluctuations of price are as injurious as they are said to be, it seems strange that we should desire to impose these evils on the people of India. It would be a fine thing, no doubt, to eliminate "loss by exchange" from the Indian Budget, but it would seem hard if this were done at the expense of those who are not represented and do not possess influence. Officials can approach chancellors and secretaries, but the ryot can only suffer without knowing the cause. Had the reverse of the existing depression occurred, we should have heard no complaint from Government. The loss of the people would have been treated as "inevitable," and governing people would have accepted the situation. Now they cry out very naturally, and do not seem disposed to consider what may be the effect of the changes proposed on the great producing classes to whom any alleviation of their poverty seldom comes.

For those whose object is to bring out stores of unused gold and so to increase the world's supply of the metal, it will suffice to freely coin Indian gold without causing the confusion and trouble which seem to be involved in giving another legal tender to the people of India.

APPENDIX A.

STATEMENT OF THE ANNUAL PRODUCTION OF GOLD AND SILVER
IN THE WORLD EACH YEAR SINCE THE DISCOVERY OF GOLD
IN CALIFORNIA.*From Reports of the Director of the U.S.A. Mint.*

YEAR.	GOLD.	SILVER.	TOTAL.
1849	\$27,100,000	\$39,000,000	\$66,100,000
1850	44,450,000	39,000,000	83,450,000
1851	67,600,000	40,000,000	107,600,000
1852	132,750,000	40,600,000	173,350,000
1853	155,450,000	40,600,000	196,050,000
1854	127,450,000	40,600,000	168,050,000
1855	135,075,000	40,600,000	175,675,000
1856	147,600,000	40,650,000	188,250,000
1857	133,275,000	40,650,000	173,925,000
1858	124,650,000	40,650,000	165,300,000
1859	124,850,000	40,750,000	165,600,000
1860	119,250,000	40,800,000	160,050,000
1861	113,800,000	44,700,000	158,500,000
1862	107,750,000	45,200,000	152,950,000
1863	106,950,000	49,200,000	156,150,000
1864	113,000,000	51,700,000	164,700,000
1865	120,200,000	51,950,000	172,150,000
1866	121,100,000	50,750,000	171,850,000
1867	104,025,000	54,225,000	158,250,000
1868	109,725,000	50,225,000	159,950,000
1869	106,225,000	47,500,000	153,725,000
1870	106,850,000	51,575,000	158,425,000
1871	107,000,000	61,050,000	168,050,000
1872	99,600,000	65,250,000	164,850,000
1873	96,200,000	89,250,000	185,450,000
1874	90,750,000	71,500,000	162,250,000
1875	97,500,000	80,500,000	178,000,000
1876	103,700,000	87,600,000	191,300,000
1877	114,000,000	81,000,000	195,000,000
1878	119,000,000	94,800,000	213,800,000
1879	108,700,000	96,000,000	204,700,000
1880	106,400,000	96,700,000	203,100,000
1881	103,000,000	102,000,000	205,000,000
1882	99,000,000	111,800,000	210,800,000
1883	94,000,000	117,000,000	211,000,000
1884	95,000,000	115,000,000	210,000,000
Total...	\$3,882,975,000	\$2,250,375,000	\$6,133,350,000

APPENDIX B.

Estimated Stock of Gold and Silver at the end of periods named, in money and hoarded:—

	Gold.	Silver.
1850	£167,000,000	£481,000,000
1860	395,000,000	441,000,000
1870	535,000,000	409,000,000
1880	638,000,000	420,000,000
1884	654,000,000	437,000,000

Proportion of Coinage according to Periods (per cent.):—

	Gold.	Silver.
1851-55	87·9	12·1
1856-60	79·5	20·5
1861-65	81·6	18·4
1866-70	68·7	31·3
1871-75	73·2	26·8
1876-80	69·1	30·9
1881-84	71·7	28·3
1851-84	75·6	24·4

(Sötbeer, as quoted by Mr. Palgrave.)

Mr. Palgrave concludes that the coinage of gold has exceeded the estimated production by nearly one-third, and that of silver has exceeded the production by close to half during the 34 years.

The total coinage of the period is estimated at a value of—

Gold ... £1,136,102,700 | Silver ... £367,018,150

APPENDIX C.

Value of Total Imports and Exports of Merchandise into and from United Kingdom in various years (not corrected for changes in price):—

Years.	Imports.	Exports.	Total of Imports and Exports.	Year.
1860	£210,530,873	£164,521,351	£375,052,224	1860
1870	303,259,493	244,080,577	547,338,070	1870
1880	411,229,565	286,414,466	697,644,031	1880
1883	426,891,579	305,437,070	732,328,649	1883
1885	373,834,314	270,934,935	644,769,249	1885

The following are corrections made by the Secretary to the Board of Trade (C. 4456, 1885):—

Values of Enumerated Articles of Import in the under-mentioned years as actually computed and as computed at prices of 1883:—

	Declared Values in Millions.	Values computed at Prices of 1883.
1860	... ... 186	... 159
1870	... ... 250½	... 213
1880	... ... 324	... 313½
1883	... ... 336	... 336

Increase since 1870 by first column, about 30 per cent.
" " second " " 50 "

Similar correction as to Enumerated Articles of Export:—

	Declared Values in Millions.	Values computed at Prices of 1883.
1860	... ... 97	... 87
1870	... ... 143	... 113½
1880	... ... 143½	... 138
1883	... ... 146½	... 146½

Increase since 1870 by first column, *nil*.
" " second " 26 per cent.

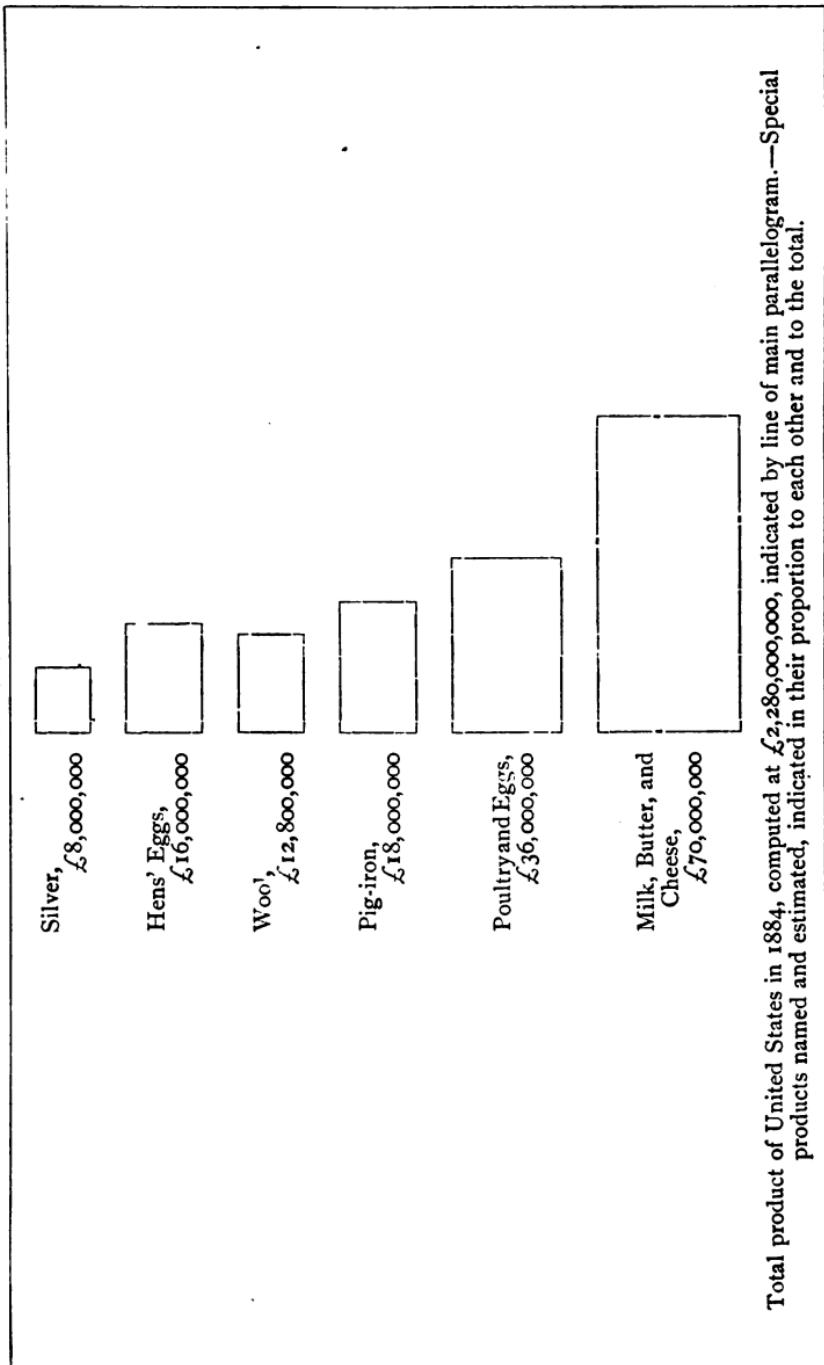
APPENDIX D.

Diagram.—Comparison of Cotton Manufacture in the United States of America, 1830 and 1884. (E. Atkinson, in *l. cit.*, p. 120):—

Spindles	1830. 1,600	—	Increase.
	1884. 6,100	—	276 per cent.
Operatives	per 1,000	1830. 49	Decrease.
	1884. 17·2	—	64 per cent.
Pounds per	operative	1830. 9·94	Increase.
	per day...	1884. 31·22	214 per cent.
Wages per	operative	1830. £33	Increase.
	per year...	1884. £58	77 per cent.
Profit per	yd. at 10%	1830. 1½d.	Decrease.
	on Capital	1884. ½d.	83 per cent.

Mr. Atkinson estimates the increased product of twenty-one crops from 1865 to 1885 (inclusive), over twenty-one crops from 1841 to 1861, at 35,000,000, worth about £400,000,000.

APPENDIX E.
Diagram of relative importance of various products in the United States of America in 1884 (E. Atkinson, p. 157).



APPENDIX F.

Specimen of fluctuations of prices from 1824 to 1826:—

Prices—July, 1824 to June, 1826.

	July to Nov. 1824.	Dec. 1824 to June 1825.	Jan. to June 1826.
Cotton (Georgia) per lb.	8½d.	17d.	6½d.
Indigo	11s.	14s.	9s.
Silk (China)	16s. to 25s.	18s. to 29s.	14s.
Sugar (B. P.) per cwt.	30s.	41s.	28s.
Coffee	59s.	77s.	48s.
Iron	per ton. £6 to £7	£11	£8 10s.
Lead	£23	£30	£22

APPENDIX G.

Total tonnage of vessels entered and cleared at ports in the United Kingdom in various years:—

Years.	British Tons.	Foreign Tons.	Total.
1860	13,914,923	10,774,369	24,689,292
1870	25,072,180	11,568,002	36,640,182
1880	41,348,984	17,387,079	58,736,063
1884	46,671,701	17,600,821	64,272,522

APPENDIX.

APPENDIX H.

Emigration from United Kingdom from 1853 to 1885, with destinations of the emigrants:—

Years.	U.S. of America.	British America.	Australasia.	All Others.	Total.
1815-52 (38 years) ...	2,064,581	1,036,714	310,836	51,461	3,463,592
1853-60 (18 years) ...	983,625	159,250	397,389	41,654	1,582,475
1861-70 (10 years) ...	1,424,466	195,250	280,198	67,656	1,967,570
1871-80 (10 years) ...	1,531,851	232,213	313,106	151,226	2,228,396
1853-85 (33 years) ...	5,183,669	788,843	1,213,040	364,134	7,549,886
1815-85 (71 years) ...	7,248,250	1,825,557	1,523,876	415,595	11,013,278

The immigrants into the United Kingdom from all parts from 1871-1885 were 1,295,853.

Statement showing the number of immigrants from Europe arrived in the United States since the year 1851, distinguishing the immigration from the British Isles—

	1851 to 1860.	1861 to 1870.	1871 to 1880.	1881.	1882.	1883.	1884.	1885.
From British Isles	1,338,993	1,106,976	984,908	153,718	179,423	158,092	129,294	109,508
From other parts of Europe	1,114,567	1,073,431	1,276,996	373,723	467,341	363,062	322,912	241,980
Total immigration from Europe	2,452,660	2,180,407	2,261,904	527,441	646,764	521,154	452,206	351,488

Calendar years from 1851 to 1870. Years ended June 30 subsequently.

APPENDIX I.

Shipments of Gold and Silver to India from United Kingdom :—

Year.	England.		Mediterranean.	
	Gold.	Silver.	Gold.	Silver.
1854	£1,774,299	£3,132,003	£48,456	£1,451,014
1855	948,272	6,409,889	243,239	1,524,240
1856	404,749	12,118,985	74,039	1,987,916
1857	269,275	16,795,232	259,986	3,350,689
1858	168,305	4,781,923	165,231	911,043
1859	788,269	14,828,521	142,144	1,521,970
1860	1,669,746	8,038,276	765,138	2,764,054
1861	783,543	6,838,292	644,934	2,021,060
1862	1,715,963	10,138,506	1,676,689	4,461,273
1863	3,173,442	8,213,264	4,849,521	6,923,269
1864	2,041,854	6,175,270	4,928,891	10,681,428
1865	555,725	3,621,330	3,794,425	6,123,968
1866	478,217	2,374,939	2,393,062	4,704,549
1867	258,904	643,927	1,240,129	1,408,297
1868	1,564,635	1,650,132	4,963,551	1,908,421
1869	1,519,125	2,341,035	1,107,281	4,223,113
1870	1,277,210	1,918,508	816,509	297,292
1871	1,728,368	3,649,667	1,552,018	242,456
1872	1,399,352	6,278,935	1,992,225	253,680
1873	1,573,163	3,363,822	1,382,949	115,170
1874	1,039,402	6,841,487	1,677,259	929,150
1875	232,589	4,009,942	900,549	537,176
1876	1,474,908	9,522,751	1,737,733	1,573,311
1877	2,057,394	15,971,206	1,074,252	890,002
1878	1,061,529	5,703,514	539,668	200,976
1879	2,276,807	6,534,081	2,703,409	1,135,675
1880	2,142,611	5,001,430	1,726,795	1,624,624
1881	1,502,437	4,117,293	1,030,308	418,780
1882	2,020,374	5,971,007	1,491,938	2,519,510
1883	1,288,620	6,828,905	648,568	396,689
1884	3,252,340	7,969,258	928,873	699,097
1885	1,471,487	7,732,038	667,322	1,130,964
Total..	£43,312,914	£209,515,368	£48,167,090	£68,932,856

Total Gold in 32 years, £91,480,004. Average nearly £3,000,000.
 Total Silver " 278,448,224. " 9,000,000.

APPENDIX K.

Drafts by Home Government on India, and amounts received :—

Year	Bills and Telegraph Transfers.	Amount received in Sterling.	
		Rs.	£
1861-62	1,20,03,592	...	1,193,729
1862-63	6,66,37,287	...	6,641,576
1863-64	9,01,41,740	...	8,979,521
1864-65	6,82,45,100	...	6,789,473
1865-66	7,04,71,747	...	6,998,899
1866-67	5,84,14,133	...	5,613,746
1867-68	4,28,18,177	...	4,137,285
1868-69	3,83,40,000	...	3,705,741
1869-70	7,20,00,000	...	6,980,122
1870-71	9,00,85,000	...	8,443,509
1871-72	10,70,00,000	...	10,310,339
1872-73	14,70,25,000	...	13,939,095
1873-74	14,26,57,000	...	13,285,678
1874-75	11,74,37,000	...	10,841,615
1875-76	13,75,00,000	...	12,389,613
1876-77	14,85,75,122	...	12,695,799
1877-78	11,69,85,000	...	10,134,455
1878-79	16,91,23,612	...	13,948,565
1879-80	18,35,00,000	...	15,261,810
1880-81	18,32,77,000	...	15,239,677
1881-82	22,21,09,350	...	18,412,429
1882-83	18,58,56,593	...	15,120,521
1883-84	21,62,15,462	...	17,599,805
1884-85	17,10,22,118	...	13,758,909

Total drawn from January, 1861, to 31st March, 1885 :—

Rupees, 2,85,74,40,033. Received, £252,421,911.

Average received about £10,000,000.

APPENDIX L.
INDEX NUMBERS showing FLUCTUATIONS of PRICES in INDIA of certain selected Produce,
1864-69 to 1884.

Date.	Produce consumed in India : three food-grains, Jowar, Bajra, and Ragi. Index Number comprising price of these.	Produce partly consumed in India and partly imported : Rice, common Wheat, Index Number comprising price of these.	Produce of India chiefly Exported : Cotton, raw Castor Oil, Linseed, Jute, raw Hides. Index Number comprising prices of these.	Index Number comprising total of these three Index Numbers. N.B.—Produce measured in Silver.		Index Number. Rate of Exchange on London. (Col. 2 of Statement D.)	Index Number. Rate of Exchange on London. (Col. 5.)
				1.	2.	3.	4.
Average of five years, 1864-69 }	100	100	100	100	100	100	100
1870	84	92	108	97	96	96	96
1871	63	71	107	87	99	98	98
1872	70	74	109	90	98	96	96
1873	70	84	110	92	96	96	96
1874	71	99	110	96	95	95	95
1875	68	81	95	84	93	93	93
1876	83	85	100	92	88	88	88
1877	153	94	109	119	89	89	89
1878	142	128	116	126	85	85	85
1879	109	119	119	116	86	86	86
1880	78	96	115	100	86	86	86
1881	63	79	105	88	85	85	85
1882	67	78	94	83	84	84	84
1883	66	87	107	90	84	84	84
1884	72	93	105	92	83	83	83

So far as these great articles are concerned there seems to be no relation between the Index Number (Col. 4) and the rate of Exchange (Col. 5). Prices have fluctuated much, but the Exchange has fallen steadily. (This Table is copied from Appendix to Third Report of Commission on Depression.)

Further Statements as to prices in India taken from Mr. Prinsep's Tables :—

	Wheat.	Rice.	Cotton.	Jute.
1865-69	100	100	100	100
1870-74	82.54	84.24	80.61	119.57
1875-79	87.16	115.97	72.62	127.31
1880-84	83.32	90.07	74.90	122.06

APPENDIX M.

Prices of cotton manufacturers, excluding lace, hosiery, thread, &c., for Indian shipments, 1870—1885 :—

Year.	Price per 1000 yards.	Ratio 1870=100.
1870	£16 6 0	100
1875	15 2 0	93
1880	12 16 0	79
1885	11 1 0	68

Prices of cotton yarn and twist :—

Year.	Price per 1000 lbs.	Ratio 1870=100.
1870	£78 17 0	100
1875	61 6 0	78
1880	55 2 0	70
1885	48 6 0	61

APPENDIX N.

Table of general Increase of Production of various Articles between 1872-4 and 1883-5 as given by Mr. Sauerbeck in Paper on Prices in September Number of the Journal of the Statistical Society (1886):—

Nominal value in millions at prices of 1867-77 (average).	Increase in Production.	Nominal value in millions at prices of 1867-77 (average).	Increase in Production.
£	Per cent.	£	Per cent.
Wheat and flour 64.3	22	Tea	12.2 ... 44
Barley 24.3	10	Iron	22.2 ... 39
Oats 30.2	23	Copper	5.1 ... 97
Meat 78.2	14	Cotton	53.2 ... 32
Sugar 20	68	Wool	32.1 ... 20

He estimates the "total aggregate increase in production from 1873 to 1885" at 28 per cent, or $2\frac{1}{2}$ per cent. per annum.

APPENDIX O.

Average freights (Calcutta) by steam and sail :—

Year.	Steam. s. d.	Sail. s. d.	Year.	Steam. s. d.	Sail. s. d.
1875	61 3	52 6	1884	23 9	26 3
1880	65 0	48 9	1885	32 6	33 9

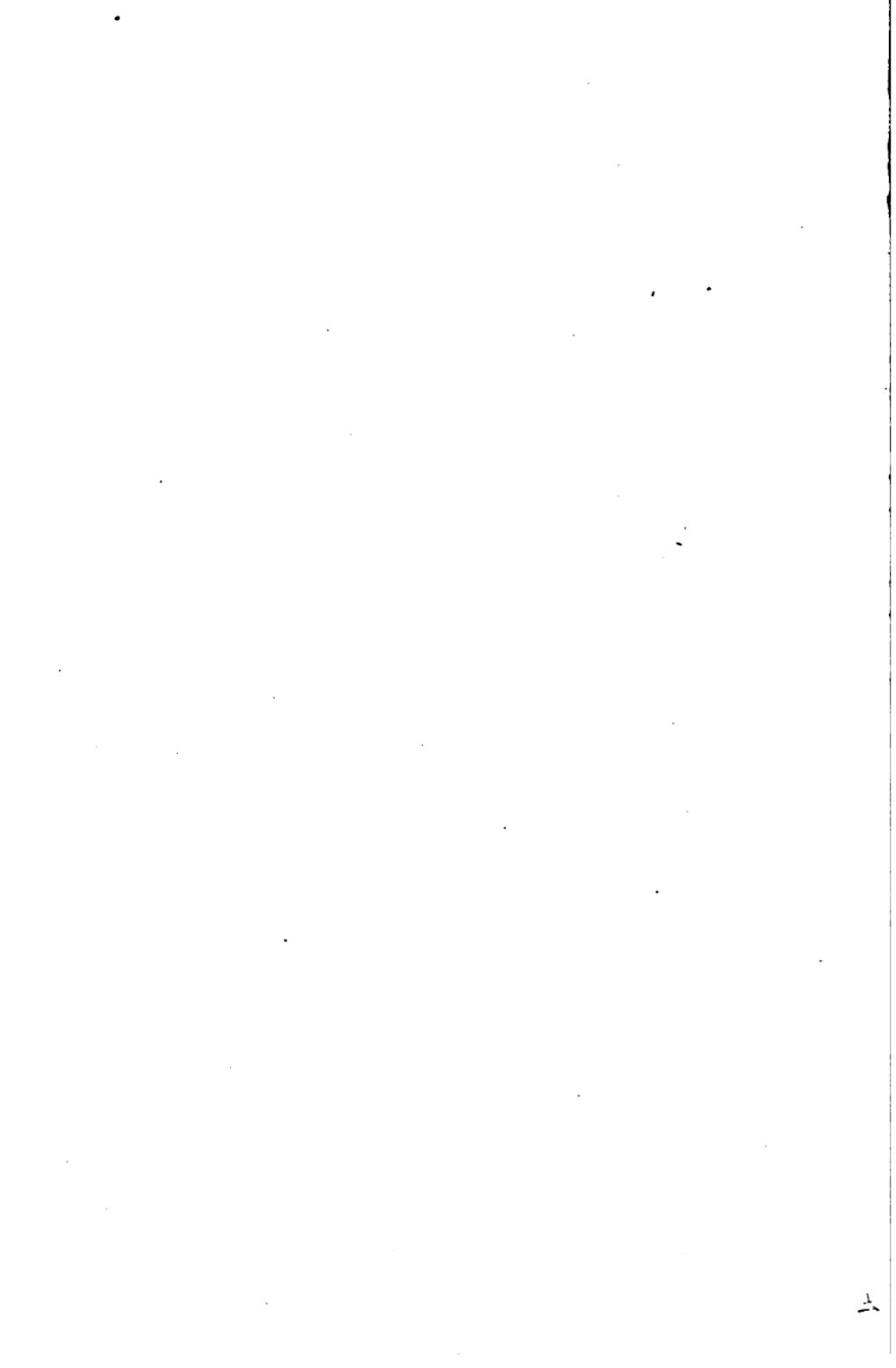
Average freights (Bombay) :—

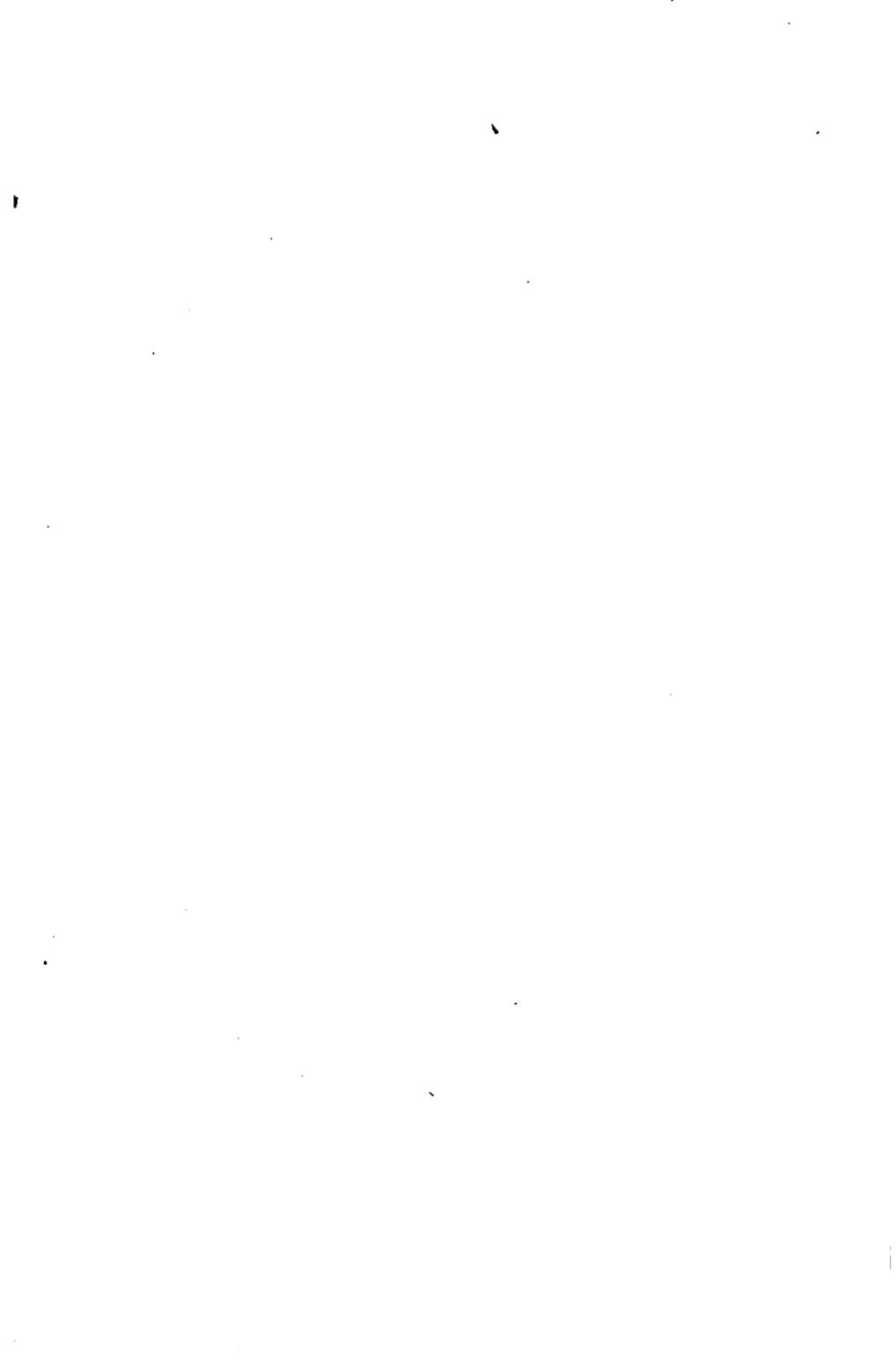
Year.	Steam. s. d.	Year.	Steam. s. d.
1875	41 3	1884	23 1
1880	35 0	1885	23 9

Average freights from Baltic to London (steam). All deals and battens :—

Year.	Steam. s. d.	Year.	Steam. s. d.
1875	50 0	1885	29 6
1880	42 3	1886	25 3
1884	25 6		







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